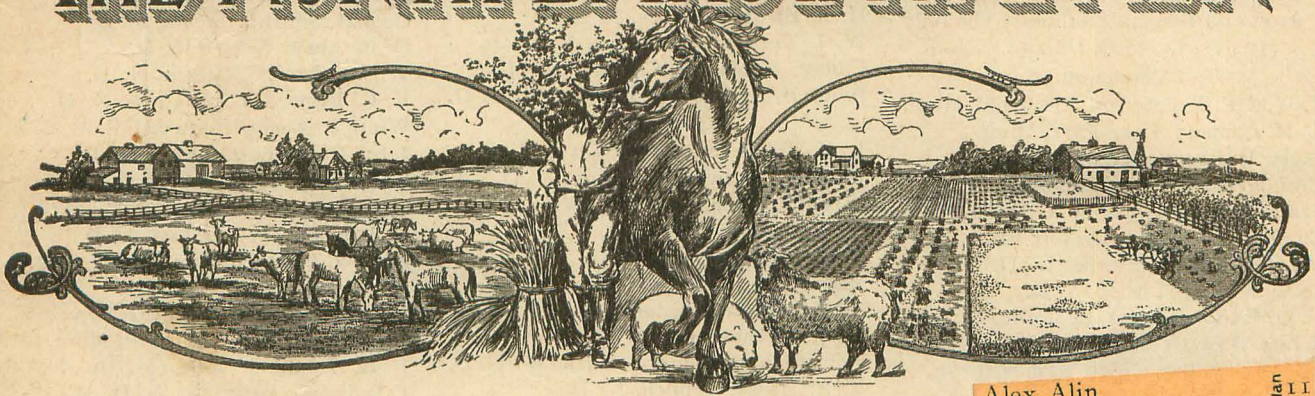


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# THE NORTH DAKOTA FARMER



Alex Alin

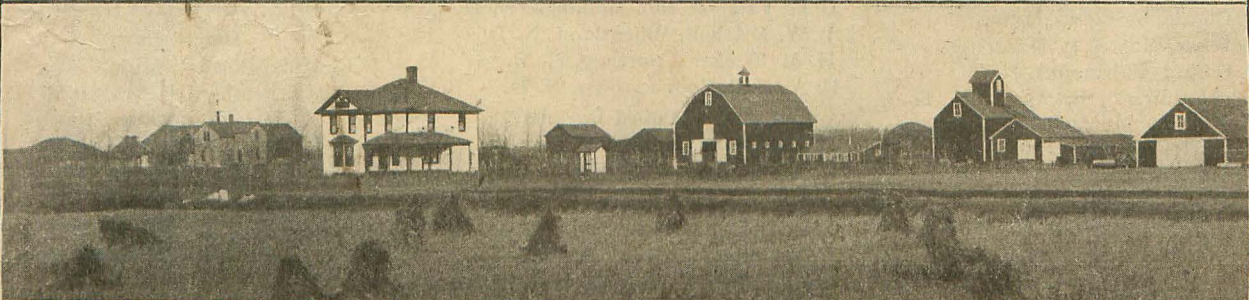
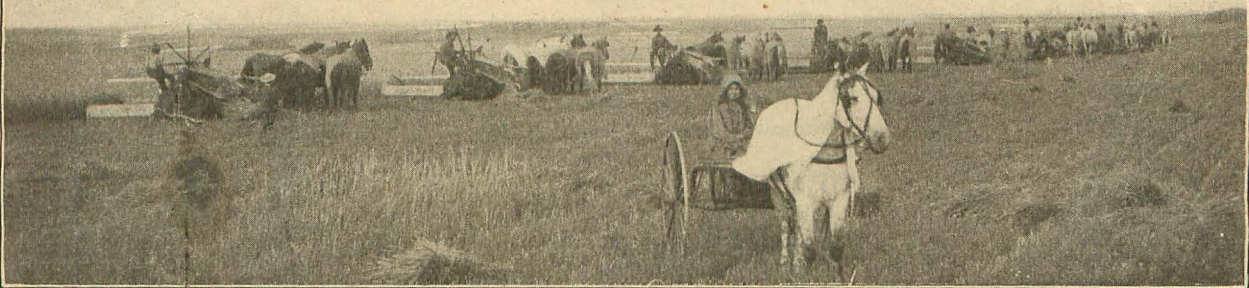
Jan 11

"THE NORTH DAKOTA FARMER FOR NORTH DAKOTA FARMERS"

Vol. 9, No. 11  
LISBON, N. D.

MAY 15, 1908

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Frank Sanford, Valley City, N. D.  
N. Upham, Grafton, N. D.  
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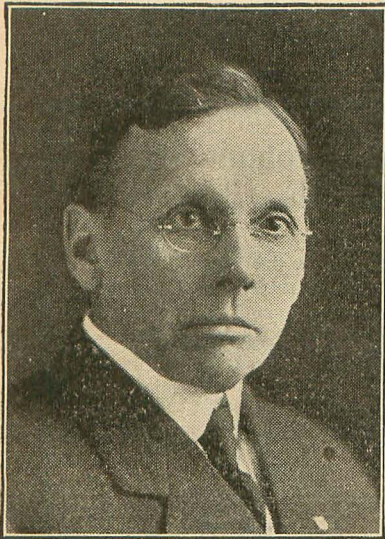
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## Political Announcements.



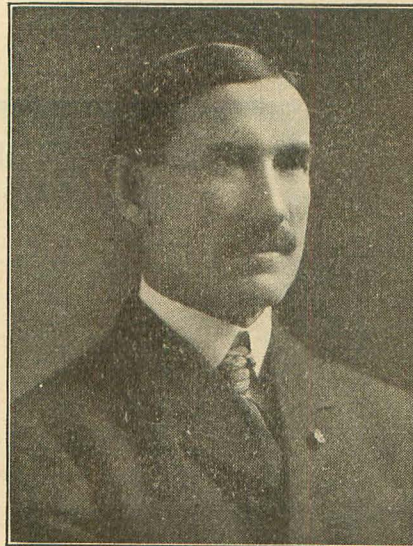
Tom Marshall, Republican candidate for U. S. Senate—"The man who does things and does them well."

For 35 years a resident of the Dakotas, commencing at the bottom as a section hand, then surveyor, merchant, banker, farmer and stock raiser.

A member of the state legislature in 1899 where he first advocated Federal grain inspection, insurance of bank deposits and was one of eight Republicans to vote with the Democrats and pass a railroad rate law.

Promoted to Congress in 1900 where for eight years he has been known as "the man from North Dakota who does things." Father of the rural free delivery service in this state; opened Devils Lake Indian Reservation; advocated and secured the passage of free alcohol bills; introduced and will pass a pure paint bill; and is aiding Senator McCumber to pass the Federal grain inspection law.

Is a Progressive Republican and opposed to the further rule of "McKenzieism" and the corporate domination of state politics. Stands with Roosevelt for the square deal for everybody with special privileges for none.



FOR CONGRESS

I am a candidate for the Republican nomination for Member of Congress before the Primaries to be held on the 24th day of June next, and earnestly solicit your support.

I believe in the repeal of the tariff on lumber and in a general revision of the tariff schedules. Am in favor of a national grain inspection law and in the general policies which have been advocated by President Roosevelt. I have lived in the state of North Dakota for over twenty-six years and have a thorough knowledge of the needs of our people.

Should I be nominated and elected, I will use my best efforts for the best interests of all of the people and all parts of the state.

Respectfully,

L. B. HANNA

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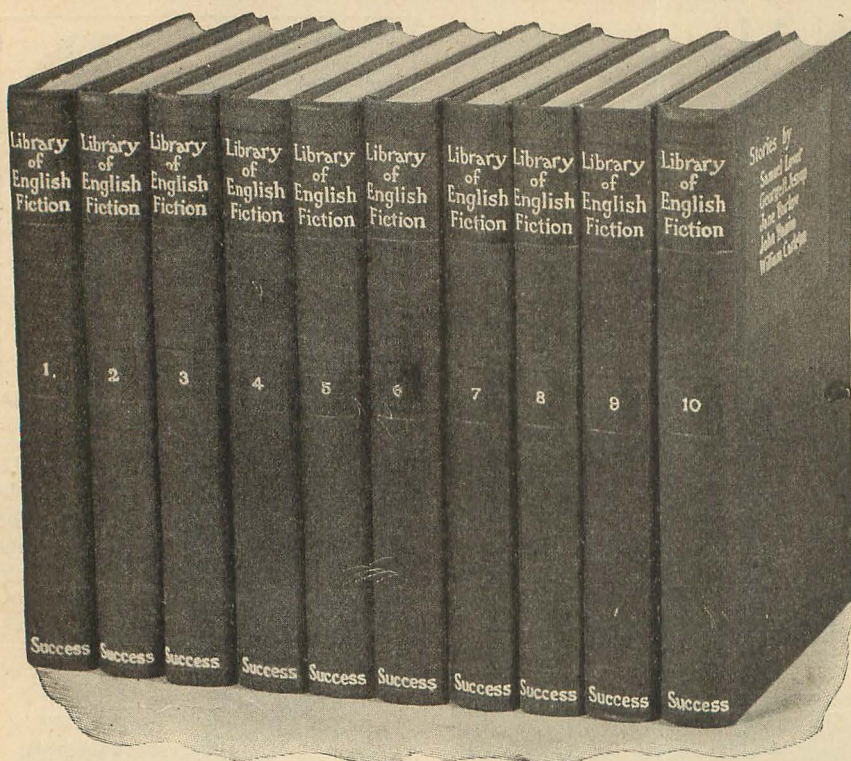
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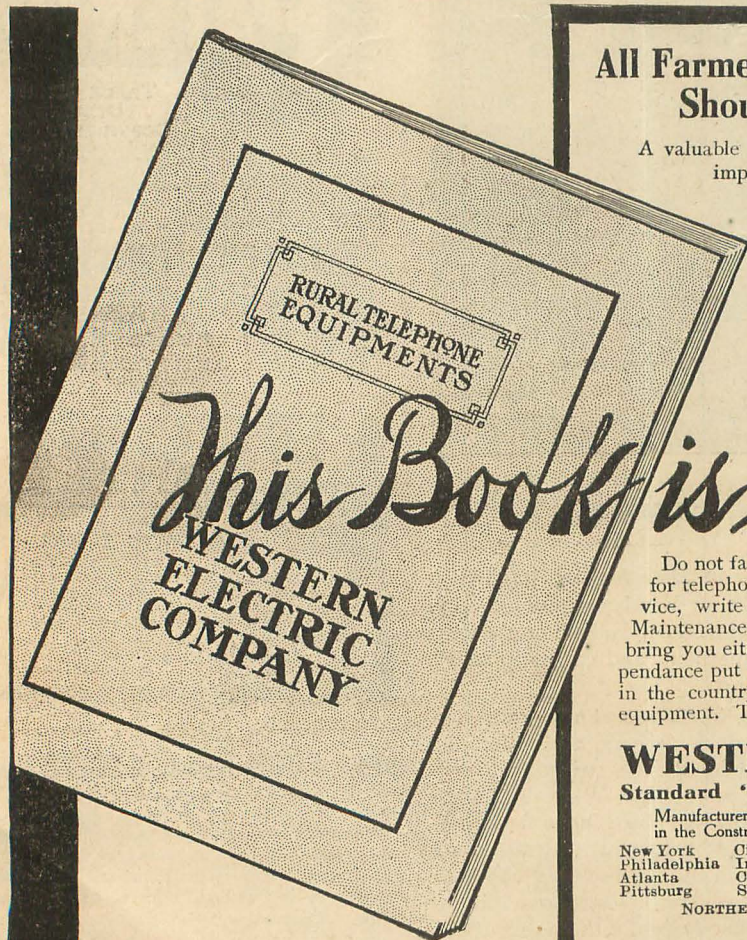
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# THE NORTH DAKOTA FARMER

Vol. 9, No. 11

LISBON and FARGO, N. D., MAY 15, 1908

50 Cents a Year

## MY EUROPEAN TRIP

By PRES. J. H. WORST, N. D. A. C.

### THE DAIRY INDUSTRY OF HOLLAND

Dairying is one of the chief industries of Holland. The type of dairy cow, known popularly as Holstein-Friesian, is bred there in purity and is a wonderful producer of milk. The milk, tho not carrying a large per cent of butter fat is yet well adapted for cheese making. Hollanders, however, object to the name Holstein-Friesian for their famous dairy breed of cattle, contending, and rightly too, that Holstein has no claim upon them. Hollanders insist upon Dutch-Friesian as the correct name and I believe they are so recorded in their carefully kept herd books. Cows are worth from \$125 to \$200 per head, owing to quality. A calf, regardless of its blood lines, cannot be recorded in the herd book until after having been inspected by a committee representing the Netherlands Herd Book Association and found up to a required standard.

### Types of Cheese

Three general types or varieties of cheese are made in Holland, viz., Edam, Leyden and Gouda. In the manufacture of Leyden cheese the cream is removed for butter making and the skim milk made into cheese. Certain spices are added which give the cheese an agreeable flavor. The Leyden cheese is made mostly by farmers, is not expensive and the demand for it is, I believe, a local one.

Gouda and Edam are made from the whole milk and, especially the latter, enjoys a large export demand. It is the round, hard shelled, painted cheese so popular at home and in other countries. The manufacture of Edam cheese is confined quite generally to north-western Holland, Alkmar and Hoorne being, perhaps, the largest primary cheese markets in the world. Extensive factories abound, most of them operated on the co-operative plan. The province of Friesland alone has eighty-eight co-operative and twenty-four private creameries. Besides these factories a

great many farmers make cheese, in large or small quantities, according to the size of their dairy herds

### Leuwarden Creamery

I visited the co-operative creamery situated at Leuwarden where they use the milk from two thousand cows. At this creamery cheese is made from whole milk and also cheese of a certain quality is made from skim milk, but the quality of the cheese is never misrepresented. Whole milk cheese or skim milk cheese is clearly designated when the product is marketed. The government strictly guards against misrepresentation of dairy products to insure a steady market on the merits of the butter and cheese, that is manufactured. Considerable skim milk is bought by farmers after being separated from the cream, at the factory, and

holders furnish the milk and are paid on a basis determined by the per cent of butter fat it contains. Patrons of the creamery must be members of the corporation and as such they participate in the profits of the concern. These creameries are said to be quite profitable, so much so that the private corporations, not being able to command sufficient milk, are rapidly changing into co-operative factories; farmers uniformly purchasing a majority of the stock.

The Leuwarden creamery made, from May 12, 1905 to May 12, 1906,

Of butter,.....	373,544 lbs.
Of cheese,.....	257,521 lbs.
For the butter they realized	\$85,726.
For the cheese they realized	50,208.
For the milk they realized	25,512.

Total.....	\$161,446.
Operating expense and interest on investment.....	\$18,118.
Paid shareholders for milk	143,328.
Total .....	\$161,328.



A Herd of Holsteins

taken back to the farm. What is taken back is paid for at prices varying with the price of cheese. Where the separator is used the cream is manufactured into butter and the milk into cheese; where the gravity system of cream separation is in vogue the milk is used for other purposes.

The co-operative creameries are most popular. The stock of this style of creamery is owned almost exclusively by farmers or land owners, the stock-

Salaries paid as follows:

Salary of manager .....	\$700.00
head butter maker	291.20
two helpers .....	416.00
head cheese maker	291.20
two assistants.....	436.80

Total .....

\$2,135.20  
These salaries are included in the operating expenses but are given separately to indicate the rate of wages



paid in Holland for that class of labor. Other kinds of labor, especially farm labor, average considerably lower. It will be observed, however, that the average income per cow is slightly in excess of \$71.66, after deducting operating expenses and interest on investment.

#### Number of Cows Land Will Support

The number of cows that a given area of land will support, all the year round,

#### Experiment Stations

Largely thru the influence of these associations the government has established five dairy experiment stations where chemical and bacteriological tests are made of milk, and where practical feeding and butter and cheese making experiments are carried on for the benefit of the farmers and factories in the dairy provinces. Food stuffs and

He also is charged with the duty of enforcing the law against adulteration or misbranding of dairy products.

#### Weekly Markets

At Alkmar and Hoorne are the principal Edam cheese markets, each town having its weekly market day. On this particular day the factories and the farmers bring their weekly make of cheese—made four weeks before; for that length of time is required for the cheese to ripen sufficiently to satisfy the purchaser—and rank them up, two cheese deep, with narrow spaces separating each man's lot of cheese from that of his neighbor. Some lots are very large and some are quite small. Each lot is covered with hay or canvass to protect the cheese from the heat of the sun. The great cheese market square of several acres in extent is usually quite covered with cheese.

At 10 A. M., cheese merchants begin to examine the different lots of cheese and make bids for the same. The highest bidder gets the cheese, of course. As soon as a deal is closed the cheese carriers, of which there are three organizations, relics of once ancient guilds and still distinguished from each other by the wearing of yellow, red, or green hats, load about sixty of the round cheeses upon a rocker shaped tray, then move away to the weighing scales with a peculiar swaying of the body, or ambling gait, which scarcely jars the cheese.

This tray is slung to the shoulders of two men by means of straps, one man walking before and the other behind the tray. The weighing scales, or huge balances, are evenly poised, with cheese one side and an exact but known weight of metal slugs, on the other. They do not make use of modern weighing devices. After the weight is thus determined the cheese is reloaded on to the trays and the carriers amble away to



Cheese Market Square, Alkmar, Holland

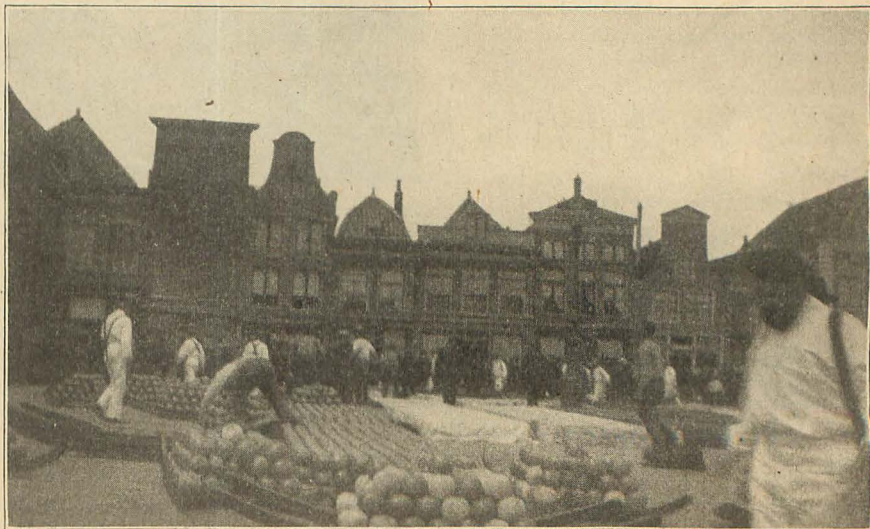
varies with the condition and quality of the soil. Estimates made by the farmers over there place the number at from one cow per acre to one cow to two acres of land. In other words, a twenty acre farm will support from ten to twenty head of cows, affording them pasture for summer and grain, roots, hay and other roughage for the winter months. This includes the number of horses necessary to perform the animal labor and the usual complement of sheep, generally three sheep to each cow are kept on a dairy farm. As ditches serve the purposes of fences and average only about sixty feet apart, livestock can be changed frequently to fresh pasture. Sheep are kept mainly for the improvement of the land. They also are a source of considerable revenue.

#### Creamery Associations

Holland has a National Association of Co-operative Creameries. This Association is made up of the provincial associations, of which the co-operative creamery, already described, is the unit.

The national association is made up of delegates from the provincial associations and the provincial associations are made up of delegates from the co-operative creameries. These associations practically regulate the dairy business of the country and make recommendations to the government, which, whenever reasonable, are favorably considered.

soils also are analyzed with a view to making every acre of land produce its best, of pasture and winter feed, and to enable the dairyman to use such feed as will insure him the utmost profit from his cows. Each experiment station is provided with laboratories and dairy machinery and sufficient land and stables to maintain a small dairy herd for experimental purposes. The director of the experiment station is by law the legal advisor for his province, on all matters pertaining to the dairy industry, and the farmers quite generally have implicit confidence in his judgment.



Merchants Inspecting Cheese



the canal, but a few rods distant. At the canal the cheeses are loaded into boats, to be later transported to Amsterdam or to Rotterdam, where they are stored in large warehouses until fully cured when, after being painted, they are sold for consumption—many of

Happening in Alkmar on market day we saw one hundred seventeen thousand and cheeses disposed of, as above described, in the course of the day. An average of 1,700,000 pounds of Edam cheese are sold weekly in these two village markets.



Cheese Carriers

them being exported to this and to other countries.

The usual weight of an Edam cheese is about eight pounds tho many of them weigh sixteen pounds; being made double weight.

There are very few farmers in Holland who do not engage to some extent in dairying, or who do not furnish more or less milk for city consumption, or for cheese and butter factories, while many are exclusively engaged dairying.

Even the grain farmers keep a few cows and follow dairying in a small way. In southern Holland the famous Gouda cheese is made.

#### Why Not

If Hollanders can make a living and some money besides by means of dairying, on rented land, paying four per cent on land values ranging from \$400 to \$600 per acre, and with cows valued at from \$125 to \$200 per head, it would seem that North Dakota farmers should find dairying exceedingly profitable on our cheaper lands and where comparatively good cows can be purchased for from \$40 to \$50 per head. Our state is unquestionably well situated and well adapted for the dairying industry—only our people are not, as yet. Time and circumstances doubtless will produce a change of sentiment. Cheese and butter should be leading products of North Dakota.

#### ADDING FERTILITY TO THE SOIL

By C. D. Smith, Michigan Experiment Station

Extracts from an address before the Michigan Fruit Growers' Association

It used to be supposed that a chemist could tell whether a soil was fertile or not by chemical analysis. Indeed, there is scarcely a week passes in which a director of an experiment station does not receive samples of soil for analysis, asking whether the given soils are fertilized or not, or what commercial fertilizer should be added. The fertility of a soil depends as much upon the fineness of the particles, and the relation of the particles to each other, as upon the chemical composition of those particles. We cannot dispense with the chemist, but we have learned to supplement the information he gives us by a study of the physical compositions of the soil.

The first new thing that I note is that the real value of barnyard manure does not lie in the plant food which it contains, but in the fact that organic matter is added to the soil, and that thereby the amount of water that the soil will hold is greatly increased. Remember that what makes a crop of beets or a crop of grass possible is abundance of water to dissolve the plant food, and water to carry it into the plant.

It is safe to say that for every pound of matter in the crop there is required 300 pounds of water in the soil during the growing season. The importance of water, therefore, cannot be exaggerated, and any statement regarding the productivity of the soil that neglects its capacity to hold water, and

#### HOW SUMMER CAME TO THE SLOPE

By Hugh J. Hughes

Chinook winds down the gulches came singing soft and low,  
"White flowers of the North Wind, 'tis time for you to go!"  
And lover-wise he wooed them with many a breath and sigh;  
Said Man, the Fire-Builder, "Chinook is passing by."

Down many a misty canyon the sunbeams danced their way;  
Before them slunk the shadows, behind them swept the Day,  
And past the orient colorings of buttes decrepit and sear  
The young Chinook came singing the life-dawn of the year.

By many a stream torrential, down gulch and canyon hurled,  
The white flowers went to bourgeon the tides that sweep the world;  
Up to the smoking mesas the coyote climbed to see  
The sickle of the new moon of the summer yet to be.

Beneath the soil frost-girdled the wind-flower, sleeping, stirred;  
The mighty cry of Living its sentient heart had heard;  
And thru the bunch grass creeping, came shyly, one by one,  
The children of the earth-mould,—the flowers of the sun.

Came teal, and grey goose honking adown the sloping wind;  
The wild-rice lakes before them, a thousand miles behind.  
Far thru the misty mornings, to the Fire-Builder's house,  
With breath of sod that quickens, came the booming of the grouse.

So came the ancient Summer—the Summer ever new,—  
To the pulches, and the mesas, and the Fire-Builders few  
Who laughed within their houses—O little race of men!—  
"Chinook is blowing softly: the Summer comes again."



# MEN WANTED TO SELL OUR HARDY NORTHERN TREES AND FRUITS SALARIES PAID WEEKLY

The Northwest Nursery Co., Valley City, N. D.

second to yield it to the growing crop readily, is certain to lead to serious error. Barnyard manure applied to clover sod, plowed under and thoroly mixed with the earth for a corn crop, serves to double that crop, not so much by the plant food which it adds, as by changing the physical texture of the soil in the first place, and by thickening the water films about the soil particles in the second place.

We sow two seeds of clover, one on one plot, the other on another. As the clover plants grow, one gets practically all of its nitrogen from the air, the other from the soil. The one has upon its roots little nodules, little bulbs, little warts, in which there live minute plants with the unique ability of feeding upon the nitrogen of the air and converting it into forms which can serve as food for plants. Wherever these nodules are present, you may be sure that the plant is utilizing a part of the great ocean of nitrogen which flows over it. The other clover plant without these nodules cannot utilize this great gift of free nitrogen, but must use the stored nitrates of the soil.

Again, where organic matter exists in the soil, minute organisms are converting it into forms available as plant food or into other forms which aid in increasing the water-holding capacity of the soil. These minute plants called bacteria are at work making soluble the insoluble nitrogenous phosphatic or potassic compounds. In other words, if we are to believe the statements of modern scientists, soil is a great arena in which various forms are battling, some working to the good of useful plants, some working them injury. It is the main function of the farmer to aid his friends among these soil bacteria, and to destroy his enemies. The addition of barnyard manure to the soil does more to help the friends of the farmer among these bacteria than any other one thing he can do.

In case you cannot get barnyard manure, the next best thing is to plow under certain green crops. Among these green crops, none, all things considered, can be compared to clover. But where clover is not possible, I am recommending soy beans for heavier soils and cowpeas for the sandy loams. Note that where the roots of the soy beans have not these nodules, the crop

may be expected to contain but sixty-three pounds of nitrogen per acre, while on the same soil, fertilized in the same way, if these nodules are found on the roots, the crop will contain 152 pounds of nitrogen per acre.

## NORTH DAKOTA FARMERS' INSTITUTES Spring Circuit, 1908

Hazleton, Emmons—Tuesday, May 19.  
Ashley, McIntosh—Thursday, May 21.  
Lidgerwood, Richland—Sat., May 23.  
Fullerton, Dickey—Monday, May 25.  
Stirum, Sargent—Tuesday, May 26.  
Underwood, McLean—Thurs., May 28.  
Dogden, McLean—Saturday, May 30.  
Stanley, Ward—Monday, June 1.  
Crosby, Williams—Wednesday, June 3.  
Columbus, Ward—Thursday, June 4.  
Towner, McHenry County—Sat., June 6.  
Esmond, Benson—Tuesday, June 9.  
Harvey, Wells—Thursday, June 11.  
New Salem, Morton—Saturday, June 13.  
Hebron, Morton—Monday, June 15.  
Dickinson, Stark—Tuesday, June 16.  
Wibaux, Montana—Wed., June 17.  
Bowman, Bowman—Thursday, June 18.  
Reeder, Adams—Friday, June 19.  
Hettinger, Adams—Saturday, June 20.  
Lemmon, South Dakota—Mon., June 22.  
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Clifford, Traill—Thursday, June 25.

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### SOLVING THE FLAX PROBLEM

The modern marriage of science and industry has already brought about some wonderful results in the world of work. Science has lightened the burdens of man, and, at the same time, made his toil more efficacious. Perhaps the most striking manner in which this has been done is in the utilization of by-products. Modern industry is satisfied to throw nothing away. It has been found that the real fortunes lie in the dump piles. The familiar example of the pig, every portion of which, save the squeal, is utilized in the meat-packing industry, finds many parallels in other industries.

There are still, however, many appalling leaks in our industrial and agricultural methods, many problems for the utilization of waste that science has not yet solved. One of the most important of these to the northwest has been the flax straw, which in huge quantities every year is burned or otherwise destroyed. The fibre of flax straw is the raw material from which all kinds of linens are made. But the ancient process of retting the straw makes it impossible to save the valuable flaxseed, which in Europe mostly goes to waste. In the northwest, on the other hand, we raise flax for the seed entirely and the straw has been largely a waste product. The great Minneapolis output of linseed oil and cake represents a tremendous waste of flax straw, which seems to hold the potentiality of fine linens yet unwoven.

How to save both the seed and the fibre from the useful flax plant is the problem upon which science has long been at work. A Massachusetts inventor now claims to have solved it. Perhaps he has done what a long line of predecessors have failed to do. If so, he has added at one fortunate stroke a huge value to the flax crop. There are over four million acres of land in the United States annually devoted to raising flax, and the seed crop is worth nearly twenty million dollars. The American straw, according to the agricultural department, in length and quality far surpasses for the production of fibre the average straw which is turned into fibre for the world by the Russian peasants.

The new process, partly mechanical and partly chemical, cuts out the long and laborious processes that are historic, and turns out linen from straw in twelve hours. It saves the seed and 250 pounds of fibre from 1,000 pounds of straw, in place of 170 pounds yielded by the old ways. And the "shive," wasted by the European method, is saved for paper pulp.

The lack of cheap labor has hitherto debarred the United States from making linens. If the Massachusetts inventor

says truly, this handicap will now be removed by the use of machinery and method which make cheap labor unnecessary. It will be another triumph for science, and a new source of wealth for the northwest.

### HOW SOIL AFFECTS PLANTS

While variations of climate produce wonderful changes in vegetable forms, it is well established, says C. L. Allen in *The Farmer's Review*, that any vegetable grown in a given soil will assume a very different form when grown on either a heavier or a lighter one. This has been shown in a remarkable degree with the cabbage. A given variety grown for a long number of years on a heavy soil, with a liberal supply of plant food, proper care in growing the plants and in transplanting them, and constant cultivation until the crop is matured, will develop a type remarkable for size and vigor, with excellent keeping qualities, and be what is known as a Late Flat Dutch or Drumhead cabbage. On the other hand, take the same stock seed, grow it on a light sandy soil, under the same climatic influences, with the same care in cultivation, always selecting with a view to earliness and solidity, and the result will be in the same number of years a variety of the same general form but of smaller size and very much earlier. Again, a soil intermediate in character, from the same stock, during the same period, with the same care in selection, will give a variety intermediate in character as well as in period of growth.

### FARMERS' NATIONAL CONGRESS

**What it Stands For—its Aims and Work—Notable Men Connected With it—The Next Session in Wisconsin—Committee Visits Law-Makers at Washington.**

What is the Farmers' National Congress?

Tho the congress has been in existence over a quarter of a century and has met in almost every section of the country the above question is occasionally heard.

The congress is composed of delegates appointed by state officials—usually governors—to represent their several states. It meets once a year in different places for the consideration of agricultural questions of a national character, avoiding as much as possible local problems which can be better treated by state and county meetings. Its programs include addresses by prominent persons and leaders in different lines of activity

bearing on agricultural interests, and also the consideration of resolutions. Resolutions adopted by a body of intelligent conservative farmers representing almost every state in the union are very influential; and the congress has been a strong power in helping to secure the interstate commerce commission, rural mail delivery, oleomargarine legislation, freedom from taxation of denatured alcohol, increased appropriations for agricultural education, and many other things of great importance to agriculture.

The congress has attracted to it many agricultural leaders, some of whom have been called to hold office in it. Recent presidents have been Ex.-Gov. Hoard, than whom no one has done more for American agriculture; Hon. George L. Flanders, an exceptionally strong worker for agriculture, many years deputy commissioner of agriculture of the state of New York and an able lecturer on agricultural topics; Hon. Harvie Jordan, who did such magnificent work in organizing the cotton growers of the South, and Hon. John M. Stahl, of Illinois, a well known and successful farmer, agricultural editor, writer and lecturer. The present president is Col. B. Cameron, of North Carolina, who has a 7,000 acre farm and is prominent in the South in social, political, literary and religious circles. The secretary of the congress is assistant in market milk investigations in the United States department of agriculture. The New York Farmer says:

"The organization is attracting wider attention every year. The officers are picked men of brains, wisdom and experience, and they are doing valuable work in lines that are quite beyond or outside the domain of the other bodies that represent the farming interest in one way or another. Men of national reputation are among the speakers in the sessions, and the proceedings are full of valuable suggestions for the general good of agriculture. The present official force of the congress is of conspicuous merit."

The attendance at the sessions of the congress has been steadily increasing for the past few years. The 1907 session—held at Oklahoma—was a record breaker. Those who attended were edified by a fine program, received broader views and increased enthusiasm by contact with so many farmers from thirty different states, and helped the agriculture of the nation by passing important resolutions.

**Hundreds are using Personal,**  
page 3.



## HINTS ON ROAD WORK

**U. S. Office of Public Roads Tells How to Make and Maintain a Model Earth Road. Gives Practical Suggestions**

**The Plow, the Drag Scraper, the Road Grader, and the Split Log Drag are the Constant Friends of the Road Overseer**

While American road builders are as capable of constructing good roads as those of any country of the old world, they have not been as loyally supported as the men of those countries in maintaining the highways after completion, and the deplorable state of many hundred thousand miles of road is thus accounted for. County and township officials may at the outset stand the expense of having a road built, but they strenuously object when asked to provide funds to rebuild the road that has been allowed to go to ruin.

It is important that farmers learn of the benefits to be derived from good earth roads; that county boards be impressed with the need of a proper maintenance of the same, and that road builders and overseers learn how best to care for the roads in their charge.

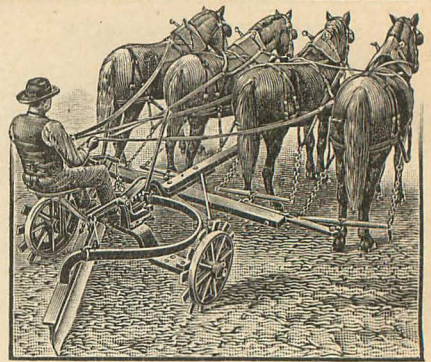
The persistent and powerful enemies of earth roads are water and narrow tires, and the constant effort of the men in charge of the roads should be to guard against their destructive effects and remedy all damage as quickly as possible. The simple implements which have been found to be of greatest assistance in this work are the plow, the drag scraper, the wheel scraper, the road grader, and the split-log drag.

With a sandy soil and a subsoil of clay, or clay and gravel, deep plowing so as to raise and mix the clay with the surface soil and sand will prove beneficial. The combination forms a sand-clay road at a trifling expense. On the other hand, if the road be entirely of sand a mistake will be made if it is plowed unless clay can be added. Such plowing would merely deepen the sand, and at the same time break up the small amount of hard surface material which may have formed. If the subsoil is clay and the surface scant in sand or gravel, plowing should not be resorted to, as it would result in a clay surface rather than one of sand or gravel. A road foreman must know not only what to plow and what not to plow, but how and when to plow. If the road is of the kind which according to the above instructions should be plowed over its whole width, the best method is to run the first furrow in the middle of the road and work out to the sides, thus forming a crown. Results from such plowing

are greatest in the spring or early summer.

In ditches a plow can be used to good advantage, but should be followed by a scraper or grader. To make wide, deep ditches nothing better than the ordinary drag scraper has yet been devised. For hauls under 100 feet, or in making "fills" it is especially serviceable. It is a mistake, however, to attempt to handle long haul material with this scraper, as the wheel scraper is better adapted to such work. For hauls of more than 800 feet, a wagon should be used.

The machine most generally used in road work is the grader, or road machine. This machine is especially useful in smoothing and crowning the road and in opening ditches. A clay subsoil under a thin coating of soil should not be dis-



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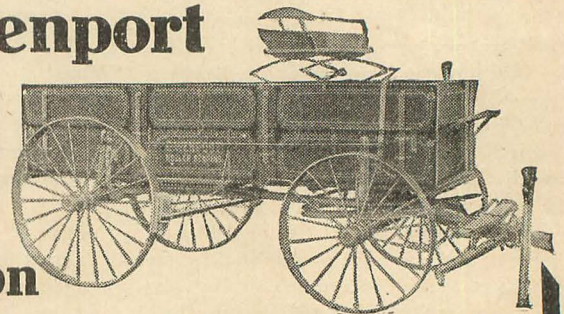
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turbed with a grader. It is also a mistake to use a grader indiscriminately and to pull material from ditches upon a sand-clay road. Not infrequently turf, soil and silt from ditch bottoms are piled in the middle of the road in a ridge, making mudholes a certainty. It is important in using a grader to avoid building up the road too much at one time. A road gradually built up by frequent use of the grader will last better than if completed at one operation. The foreman frequently thinks his road must be high in the first instance. He piles up material from 10 inches to a foot in depth only to learn, with the arrival of the first rain, that he has furnished the material for as many inches of mud. All material should be brought up in thin layers, each layer well puddled and firmly packed by roller or traffic before the next is added. A common mistake is to crown too high with the road machine on a narrow road.

The split log drag should be used to fill in ruts and smooth the road when not too badly washed. The drag possesses great merit and is so simple in construction and operation that every farmer should have one. A special article will be published later telling how to make and use the drag.

#### DESIGNS FOR DAIRY BUILDINGS

The great demand for information relating to the construction of dairy buildings led the Dairy Division of the Bureau of Animal Industry, United States Department of Agriculture, to start a line of investigation for the purpose of developing the basic principles of such construction. In order to make the work thoroly practical, these studies were extended to the planning and actual supervision of construction of a number of dairy buildings in different sections of the country. The work already promises valuable results in securing better methods of construction. In order to place the matter now available in form for wider distribution and usefulness, a number of plans, with brief descriptions, by Mr. Ed. H. Webster, Chief of the Dairy Division, have been published as Circular 131 of the Bureau of Animal Industry, and copies may be obtained free of charge on application to the Bureau at Washington, D. C.

The designs, as Mr. Webster explains, are not intended to represent the only constructions advisable for the purposes indicated, but are intended to be suggestive of certain principles of construction which any architect or builder

may use in designing a barn or other dairy building for a special location. No two locations will require or even permit of the same treatment so far as exposure, size, form, or building material are considered; but the problems of ventilation, cubic air space per cow, light, floors, ceilings, etc., are nearly alike in all cases. The designs shown represent feasible and inexpensive dairy buildings, planned by the Dairy Division and built in various sections of the country. Plans and specifications were furnished to builders, with the understanding that they would keep account of the cost of construction and furnish such other data as might be necessary for a complete description of the work.

The designs published are for a stable for 24 cows, a southern stable for 20 cows, two-story stables for 24, 50, and 100 cows, a stable with milk house for 36 cows, a combination barn for 26 cows, silos of various types, dairy houses, an ice house with milk room, a creamery for whole milk, and a creamery for city milk combination service. Details of construction of stalls and stanchions are also shown.

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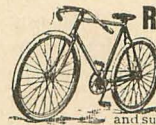
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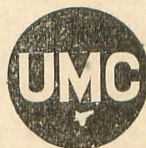
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Contest Should Read Personal on Page 3.



# Shade Trees and Gardens.

C. B. Waldron, N. D. A. C., Editor.

## GROWING STRAWBERRIES IN NORTH DAKOTA

W. R. Lanxon, Student in Horticulture,  
N. D. A. C.

Growing strawberries in this state is considered impracticable by a great many people, yet it is as easy if not easier to grow a crop of strawberries than a crop of wheat. Strawberry plants are exceedingly productive in this state, and many a bowl heaped with luscious home grown fruit has graced the table of the writer for many years past. Last year a patch of twelve rows two hundred feet long produced four hundred quarts of sale berries, besides those canned and eaten in shortcake or with cream. Mr. Bunzendahl of Forman, Sargent County, produced a wonderful crop of strawberries the past season, and his neighbor, Mrs. Johnson, sold over fifty dollars' worth of berries from a sixteenth acre patch during the summer of 1906. The abundant crops in the gardens of the North Dakota Agricultural College at Fargo the past few years prove beyond a doubt that strawberries are a sure and remunerative crop in North Dakota.

The variety best adapted for our conditions is the Senator Dunlap. It is extremely hardy, will grow freely anywhere, and scarcely if ever winter kills if well cared for.

Any good rich loam that is naturally well drained is suited for growing strawberries. A liberal coating of well-rotted manure applied to the land before plowing will conserve the moisture and aid very materially in the production of a good crop of berries. The land should be thoroly harrowed or raked to make a good firm plant bed. Set the plants in rows four feet apart, allowing the space of two feet between plants. In planting spread the roots in the ground as much as possible, taking care at the same time not to cover the heart of the plant, which should be left even with the top of the dirt. Tramp the earth down firmly around each plant. This is the most important point in planting as plants often fail to grow when the earth is loose around the roots.

Frequent cultivation thruout the summer is necessary to insure conservation of the soil moisture, and to get good vigorous plants for fruiting the next season. As soon as the plants begin sending out runners, rake them in between the parent plants. Keep the

rows narrow, not exceeding a foot and a half in width, and allow only four or five young plants to come from one parent. The others should be destroyed. If the plants are too thick in the row the young plants will not ripen well, and in dry seasons take too much moisture out of the soil.

Strawberry plants may be secured from commercial growers for about five dollars per thousand. Two dozen plants make a very good start, and if well cared for should produce at least 100 fruiting plants next year. Twenty-four plants at the College in 1900 yielded over 24 quarts of fine fruit. No garden is complete without a berry patch. Begin this year and add to your table one of the most delicious of fruits. Who would refuse a dish of Dakota grown strawberries and cream on a hot July day?

## MEANS OF ERADICATING DANDELIONS ON PARKS, LAWNS, ROADSIDES AND MEADOWS

By H. L. Bolley, Botanist, N. D. A. C.

Fortunately, late experiments indicate that a new method of fighting dandelions will eventually give marked success, in fact the man who is sufficiently patient and persistent to make a success in any work which demands constant observation and constant redoing at the right time, will have no difficulty in maintaining a weed free lawn. The dandelion may be eradicated in blue grass lawns, in parks and meadows and road sides without injury to the grass by means of chemical sprays properly applied and applied at the right time. This does not mean that they will stay out. As near as the writer can state, from the work he has done, it will be necessary to spray the lawns in the region of Fargo approximately once a month to once in six weeks thruout the year in order to hold the dandelion completely in check. During the present season four times spraying has completely disposed of a heavy growth of new dandelions and sent the dandelions of more than one year's growth into winter without any foliage to supply them food for the coming year. This does not mean that there will be no dandelions on that lawn the coming year but it does mean that with proper spraying machine and eight hours labor the lawn has apparently been freed from dandelions. Of course there are millions of wind blown seeds which will yet ger-

minate and there are many old roots which have not been completely smothered because the process of starvation has not been continued sufficiently long. However the writer can safely vouch for the statement that spraying when properly undertaken is a much cheaper means of disposing of this pest in lawns than any other mode now in use, and that the grass need in no way be injured. The writer was able to prepare a solution and properly spray an area of approximately 170 ft. by 70 ft. in two hours time. It would, of course, be impossible to cut but a few dandelions in this time. Plantain, tho more hardy, also gradually dies out under the spraying.

### Apparatus

For ordinary lawn purposes the ideal apparatus is the compressed air type of hand spraying machine. It is necessary that sufficient pressure be maintained by the pump to make a forceful spray of a fine form. If the liquid is thrown in large drops, the grass will be more or less injured as the very young grass roots beneath the soil have slight power of resisting the action of the chemical. The capacity of the tank should be approximately three or four gallons and it

should be of such neat construction that one can readily carry it about without soiling clothes. Necessarily, if it is properly air tight it will be free from leaks and chances to spill liquids.

The machine should be fitted with about three feet of compression hose and a three-foot extension rod allowing one to readily swing the nozzle over the lawn. The nozzle should be of such a nature as to throw a rather wide flaring funnel-shaped spray. For city parks, roadsides and the larger lawns some one of the traction carts will be found desirable. Cities and towns will find it an economical way of grassing the roadsides and causing the destruction of unsightly weeds. Every city and town should possess one or more good spray carts and several hand sprayers, the latter to allow spraying to be done in

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waste places, difficult to reach with the traction sprayer. A man can readily spray over an area as fast as he would mow over it whether he is working by hand or with a team. The traction sprayer is rather more rapid in action than mowing as the machine allows of traveling over rougher ground.

#### What To Use

The most satisfactory substance for general work upon dandelions and miscellaneous roadside weeds is iron sulphate, used at the rate of approximately two pounds for each gallon of water. On lawns for dandelions alone where a hand machine is used the strength of one and one-third to one and one-half pounds per gallon will be found to give the desired results, tho, if the dandelions are large and coarse and the grass hardy two pounds for each gallon of water will give best results.

#### When to Spray

On lawns do not spray until two or three days after cutting and do not mow the lawn until from two to three days after spraying. Spray on bright, sunshiny days. The lawn should be prepared for spraying by thoroly watering preceding the spraying so that it would not need to be watered for two or three days after spraying. Select any day when it is not liable to rain within the next day or two as heavy rain immediately following will destroy the weed killing power.

Whatever the method used for eradication of the dandelion, a fresh supply of blue grass seed scattered on the lawn each June and September will surely repay the cost. Care should be taken to observe that the seed does not contain a percentage of dandelion or plantain seeds.

#### FOREST PLANTING ON IRRIGATED LANDS IN MONTANA, WYOMING AND THE DAKOTAS

By Forest Service, Washington, D. C.

Extensive investigations of irrigated lands in the western states to determine the possibilities of tree planting on reclaimed tracts have just been completed by experts in the Forest Service and according to the first reports of the studies the judicious planting of certain trees around homesteads and along canals will greatly increase the value of lands where irrigation has played such a prominent part in development.

All of the land examined is of great value for agriculture and, of course,

timber production on a large scale would not be advisable even if it were feasible. Planting will be profitable chiefly for the protection it will give farm buildings, stockyards, and valuable fruit orchards from heavy winds and for the timber which can be grown for fuel, fence-posts, and other uses.

The principal difficulties to be met in tree growing in the regions where the examinations were made are the great extremes of temperature which are always an important consideration, since it is the occasional period of extreme cold and not the average winter temperature which determines the adaptability of a tree. Damage by drought and extreme heat may be largely overcome by irrigation, but there is no way to temper the wintry blasts of these wind swept prairies. It has been found, however, that the choice of proper species of trees will meet practically every difficulty encountered.

On the irrigated tracts in Montana, Wyoming and the Dakotas, belts of trees are needed on the north and west to shield the farms from the severe cold winds and on the south to check the drying winds that come from that direction.

It has been found species most suitable for windbreaks and shelterbelts are green ash, boxelder, common cottonwood, lanceleaf cottonwood, Russian wild olive, jack pine, white spruce, white elm, hackberry, Balm of Gilead, almond-leaf willow, western yellow pine, Rocky Mountain juniper, and blue spruce.

Next to protection, the most important reason for tree planting is the need of local supplies of fuel. The species which are best suited for fuel production in this region are the cottonwoods, aspen, and willow, since they will produce the greatest quantity of wood in weight per acre, in the least time. For fence posts, the planting of green ash, diamond willow, common cottonwood, Russian olive, Rocky Mountain juniper, and western yellow pine is recommended. Green ash and bur oak furnish material valuable for farm repairs.

#### PROFIT IN WASTE PLACES ON THE FARM

Many poor soils, now waste spots on the farm, would become profitable if planted with the right kind of forest trees, and cared for in the right way. Trees will often grow where grain and grass will not. Swamps, stony ridges, exhausted fields, and washed hillsides need not be abandoned. There is money in most of them if they are set to

work producing woodlots and forests. But knowledge and judgment are necessary, and bad guess may be costly.

Many trees do well in their soils—cone-bearing trees in particular. The farmer is fortunate whose land has no poor spots. Few land owners are so well off. Fertile acres are usually fairly profitable, but the gravel bars, rocky knolls, marshy swales, and exhausted and eroded slopes are not. Scarcely one of them need remain unproductive. They will grow timber—pine, locust, poplar, osage orange, oak, chestnut, or some other kind. But the soil must be studied, and the species selected to suit it. Failure might follow the planting of walnut on soil suited to white pine, or vice versa.

Studies of various regions and trees that suit them have been made by the Forest Service at Washington. Results and conclusions have been published, and may be had for the asking. The aim of these studies has been to point out how the farm's waste and neglected corners may be turned into woodlots where the farmer may grow his own posts, poles, fences, and saw-logs.

It is decidedly worth while to keep all of the farm at work. The owner pays taxes on all his land, and is out of pocket for whatever is not earning him something. Further, by growing a tree crop on land which is too poor to plow, the quality of the land itself is improved. Forests add humus to the soil, bettering its character; and it has lately been discovered that the decaying leaf litter has also the power of gathering from the air a certain amount of nitrogen, the most important of plant foods. In this respect the forest does for the soil what leguminous crops, like clover and alfalfa, do. Wood growing on worn-out land thus becomes doubly profitable. The land is made useful and improved at the same time.

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# AMERICAN SOCIETY OF EQUITY.

CHAS. U. PIERSON, Casselton, N. D.

## WHAT ARE THE PRESENT PLANS OF THE AMERICAN SOCIETY OF EQUITY AND WHAT IS IT EXPECTED TO DO IN 1908 FOR THE BENEFIT OF ITS MEMBERS.

Dear Brother Workers:

The above explains the sense of many inquiries made to me thru letters from members of the society in different parts of the state. I feel it my duty, as a matter of information, to inform you of the outline of the work as planned for this season. At a meeting of the state officers of North Dakota, South Dakota and Minnesota, held in Fargo April 20-21, plans were formulated to hold five meetings in North Dakota and other grain growing states soon after seeding, and it is expected that President Barnett of the American Society of Equity will be here from Kentucky and Mr. Windle, national organizer, to address these meetings. These meetings are to be followed by a mass meeting in each county in the state, when it is expected that a good attendance will be secured from among the farmers. Each county not having a county union will be organized at the time of the meeting.

A pledging campaign for the 1908 crop will be pushed most vigorously. The form of pledge to be used makes it obligatory for the society to first secure the minimum price for wheat and flax, also to see that money is advanced to the farmer on his grain at a reasonable rate of interest if he desires a loan in order to hold his 1908 crop; failing to accomplish either makes the pledge not binding on the part of the farmer. On the other hand if the society fulfills its obligations, the farmer is required to hold as much of his crop as he has pledged for the minimum price until a certain length of time and not to sell for a less price than will be fixed at a convention, which is to be held about July 20, probably at Fargo. Three or four of the principal spring wheat producing states are to be represented at this meeting. Not only will the minimum price for wheat and flax be fixed then, but a district union composed of North Dakota, South Dakota and Minnesota will be organized and officers elected. If the farmer who pledges his crop receives the price agreed upon, he is to pay over to the society 1c per bushel for wheat and flax to help build up a fund to support the society. This plan if followed out will insure good prices to the farmer and prosperity to the organization.

The farmers are instructed to organize local elevator companies for their own use so that when they are ready to sell they will have facilities to handle their grain, with separators and cleaners to take out the screenings so the same may be taken back to the farm and used for feed instead of giving the screenings to the old line elevator companies for nothing. As has been the practice heretofore the farmer not only let the terminal buyers have the screenings for nothing, but the farmer paid the freight on the same to the terminal market; and after wheat is unloaded and put thru several suction draughts as it passes from the car to the top of the elevators, which invariably takes out all chaff, grass seeds, dirt and light kernels of wheat, then the wheat is weighed, the scales being at the top of the elevator, but the amount of dockage is fixed on before the wheat goes thru the suction draughts and deducted from the wheat after it is weighed—instead of first weighing the wheat before the dirt and light stuff is taken out and deducting the amount of dockage from the gross weight.

Any farmer with common sense can readily understand he is being robbed by allowing such an imposition to be practiced on him by the terminal elevator companies. Thus we suffer a loss of hundreds of thousands of dollars of hard earned money to the farmers of North Dakota alone every year. There is a way out of this trouble if the farmer will build storage bins on his farm and hold his wheat and market it as directed by the A. S. of E. Our plan is to have every board of directors of farmers' elevators in this country to come to an understanding with each other that they will ship all their grain to the receiving and selling agent of the A. S. of E. at the terminals, to be sold on the market, independent of any other commission company. If the farmers will

resolve to carry out this plan they can soon build up the strongest marketing machine in the world for themselves, regardless of boards of trades and chambers of commerce. This plan will be opposed most bitterly by the boards of trades and they will attempt to use the Associated press as their ally to fight against it and discourage the farmer from attempting to put the plan in practice. But, brother farmers, you are foolish to allow them to influence you to not support a plan to establish our own system of marketing your own products thru honest methods, which you know cannot hurt any man's business but the gamblers on the boards of trades.

The society has arranged to establish terminal elevators at Minneapolis and Duluth, and if need be at Superior, and if farmers will stand by the society we will have those elevators ready for the 1908 crop. Our plans will be made known to you at the proper time. It is not deemed advisable to make known our plans to the public at the present time. This is no idle talk, brother farmer. We have shown you what the society has done in regard to helping prices for the 1907 crop. Perhaps some of you may think that you have received no benefits thru the society last year, but let me call your attention to the fact that there was about 57 per cent of our 1907 wheat crop held back by farmers in the three spring wheat producing states last fall at threshing time when the price was a dollar at our local markets. What was the cause of that? I dare say in former years when we could have secured \$1.00 for our wheat we would have sold every bushel we could spare at that price. Gentlemen, it was the controlled marketing idea as taught us by the American Society of Equity that caused the farmers to hold their 1907 crop of wheat, and by not putting all our crop on the market as it was threshed, but taking several months to market it, we kept the price up to a fair figure even thru the money panic, so we must admit we have been benefited

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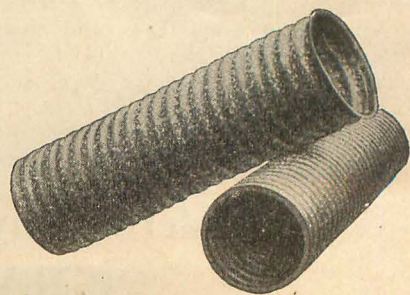
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by the society not alone in helping prices but in an educational way as well.

Farmers of North Dakota alone every The Equity Exchange at Minneapolis will be re-organized by the A. S. of E., and with our terminal elevators for our own use, we can take care of our grain at that end of the line. With the use of the farmers' elevators at the local shipping points we will have our own means of handling the grain from the time it leaves your farm until it reaches the buyer down at the terminal market. As I have said before, it will be easy to accomplish our plans if all our members will stand by us, and those who are not members join us in the good work. There is not a member in the society who sold as much as one load of wheat last fall but what secured enough profits in the price sold at, thru the efforts of the society, to more than pay his dues twice over. So why hesitate to come forward and pay up your dues at once? By doing so you will help us in our plans to protect your business. If you delay in lending the society your support while it is in need of your help, you lose the best chance you will have to form a strong co-operative organization to protect the producer from the oppressive, dishonest methods of robbery as practiced by organized trusts in their dealings with the farmer.

#### INSPECTION BILL

##### Federal Measure in Committee and C. U. Pierson's ideas of things

Mr. Chas. U. Pierson, State Secretary and Organizer for the American Society of Equity, Headquarters at Casselton, N. D. has returned from his trip to Washington, D. C., where he went in the interest of the Federal Inspection Bill, which was introduced in the Senate by Senator P. J. McCumber and in the House by Congressman Gronna. After some delay the bill came up for a hearing before the committee on Agriculture in the Senate of which Senator Hansbrough is Chairman. It appears that about every board of trade and chamber of commerce in the country sent a representative to Washington to work against the passage of the Bill, which would indicate that boards of trades are better satisfied with the present system of grading and weighing of grain than they would be to have Federal inspection. However, the farmers have a much different idea about it, they feel that federal inspection would insure a better standard of grading as the wheat would be graded according to its milling qualities for flour, and with federal inspection of weights, they feel the dockage would

not be taken from the net weight after it has gone thru several suction draughts to become fairly well cleaned and charged against the shipper, but instead of that, the dockage would be taken from the gross weight.

Mr. Pierson in company with Mr. Theo. G. Nelson, President of the Grain Growers Department of the A. S. of E., spent a week in Washington, D. C., working for the passage of the McCumber federal grain inspection bill. They went before the Senate Committee on Agriculture and Forestry, where the bill was pending and arranged for a subcommittee of the Committee on Interstate and Foreign Commerce of the House of Representatives to hear argument in favor of Federal Inspection of grain. They explained why the farmers would be benefited by federal inspection as to grading and weighing of grain. Mr. Pierson states he has reasons to believe the bill will be passed favorably by the Senate Committee, but possibly some attempt will be made by certain members of the House and Senate Committees who are leaning towards the interest of corporate institutions to hold the bill up to prevent it being reported back to the Senate and House of Representatives in time for its consideration at this session of Congress. They also interviewed President Roosevelt on the subject of federal inspection, were assured by him that federal inspection met with his approval if it will help the farmer, he believes what will help the farmer will help everybody doing a legitimate business. Mr. Wilson, Secretary of Agriculture, authorized the Committee, when they talked with him on the subject to quote him as being heartily in favor of federal inspection or any other measure that is to be of benefit to the farmer. Mr. Pierson believes the principal reason the farmer is so frequently forgotten in Legislation in Congress is because he has never sent representatives to Washington during the time Congress is in session to look after the farmers' interest. All other classes and corporations are represented there, but the farmer. If the farmer will wake up and resolve that he will not vote to return any man to office that has failed to do something for the pro-

ducer while he has been in office, either in the State Legislature or as a Representative to Washington, regardless of whatever political party a candidate belongs to, then probably our representatives in public offices will not be so willing to be influenced by corporate institutions. When a man will not do something for the benefit of his constituents who placed him in office it is time to find a man to take his place, when the time comes for his re-election. The farmers should read the Congressional Report of each session of Congress and keep posted on what our representatives in Washington are doing in behalf of their constituents. If their actions indicate they are spending their time legislating measures to benefit the large corporations and unmindful of the farmers interests, it is only right as self-protection that you refuse to vote for their return to office. Throw aside the partisan idea we have adhered to for past ages and resolve that we will co-operate with each other as a farming class in selection of men for office who will look after the farmers' interest as well as the interest of others and vote for their election. On the other hand let us vote as a man to cut out the undesirables regardless of what political party they belong to. Follow that rule for a while and you will discover that you are not altogether forgotten by the Legislators in Congress.

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**Vol. 9 MAY, 1908. No. 11**

If this paragraph is marked your subscription is out. Before re-mitting read PERSONAL on page 3. We are trying to help you in your farm life.

**"One Dollar for Three Years"**  
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Some one has well said:

There is so much bad in the best of us,  
And so much good in the worst of us;  
That it doesn't behoove any of us,  
To find fault with the rest of us.

Exchange.

North Dakota has enough of fuel as lignite coal to build up one of the greatest manufacturing centers for agricultural products of any state in the Union.

Supposing the season should be dry. Are you prepared to furnish green feed for the cows and work horses when the feed is short. Then you should put in some feed probably the best will be a field of corn. Nothing will furnish more good feed, or be better for winter should the hay crop not be what is expected.

It is not too late to plant a few more peas for the table. Peas take the place of meat and are one of our best summer foods. Put in a plot of late peas and see how well repaid you are as you eat daily of the crop. A few of the peas dried would come in well during the winter, or they may be canned while fresh and help out well in winter.

Shall we take advantage of our opportunities and convert our wheat into flour in the state and use the bran and shorts for fattening our farm animals at home? North Dakota should become the great bread producing state as well as the greatest wheat growing state in the Union.

Have you had any experience in the use of cement fence posts? If so our readers would be glad to hear from you. There is much interest in these matters at present. Cement is coming into use more and more each season and how best to use it is an important question. Let us have your experience in North Dakota.

The Red River Valley can never become a great and populous country until by organized action the country is thoroly drained and then each farm tiled and drained to put it in the best possible state. Then the valley will have as it should a million people within its confines the most happy and prosperous people of our land.

Even tho the season is dry we should not discontinue the ditching of the land in the Red River Valley. Our success in the future depends upon having the land so well drained that there can be no failure from excess of water in the land. It will cost less in a dry season to drain than when the land is wet. Keep up the good work of draining the Valley.

Looks like the Valley was again coming to its own. The Valley has been too wet for the past five years and never was the outlook more promising for another good crop than right now. There was less water in the ground this spring than for a number of seasons. The Valley needs a good crop but if the season is fairly dry good preparation of the land is essential to properly conserve the moisture for the growing crop.

Do not forget that the sheep and cattle need some salt after they go out to pasture. They should be supplied regularly and then they will thrive. An excess of salt one day and then to be deprived for a month always works an injury. Neither should we forget the water supply when dry weather comes on. Poor water or that containing much alkali will not give good results and the stock will fail to thrive.

To achieve success does not mean so much of superior wisdom or misinterpreted genius as it does keeping everlastingly at it until you win success by overcoming failures. A successful man is one not easily turned aside from the main purpose, one who makes every day and each effort count for something.

You can be a success or failure largely as you will and shape the effort of your mind. Think for yourself and think clearly.

The fifteen million bushel of flaxseed annually produced in North Dakota should all be worked up in the state. The act would then find a ready market and the feed one of the best for dairy purposes ever produced would be largely consumed in the state and the fertility again returned to the land. Our range stock would all be fattened within the state and our dairy output of butter would be equal to that of any part of the country.

A dry season in the Valley means usually too dry for the balance of the state. Farmers should not overlook this fact in the dry parts. Such a season is a good one for cultivated crops—especially corn and potatoes. Besides with plenty of corn and potatoes, beans, root crops, failure is prevented and you have enough for the family and to fatten the pigs, and chickens, also to keep a few cows to furnish the groceries for the house. No man has come to be a true farmer who does not have some stock, dairy animals, etc.

No better sweet corn is grown than here in North Dakota. Maine canned sweet corn commands a premium for its superior properties. Why should we bring canned corn from Maine? Why not grow and can it in this state? Peas and beans do well in the state and should be a profitable crop for the southern part of the state and the development of the canning industry should be encouraged. To make this a success farmers and business men must unite in an effort to put the industry on a good basis.

In dry years diversified farming is what pays and in the long run this makes the successful community. Every country and each locality has its lean years, so prepare for them. The man who grows a single crop like wheat year after year is not the best man for the community. This does not mean dodging from one thing or crop to another is to be recommended. Wheat is the leading crop in the state and we should so build up a system of diversified agriculture as to keep this for all time the main money crop around which all the others rotate for its benefit.

The North Dakota Farmer has always stood for what it believed to be for the best interests of the farmers. It has steadily refused to advertise patent nostrums, whiskies, and fakes of any kind. This has lost much of patronage and profit to the paper from a class of



advertisers who pay well and then fleece their victims. If this has met your approval you should not forget that we must have your moral and financial aid. If you owe for a year, send the subscription along to help encourage the publisher who must pay the bills. You can do us a good turn also by sending the editor an occasional article, giving your experience.

The young man whether on the farm, in the shop or the counting room, who thinks of the closing time, of the pleasure awaiting him when he has finished his day of drudgery is a failure and he deserves to be. He who succeeds thinks first of all of the duties entrusted to him and how best to further the interests of his employer, and duties keep him often at his post past the hour when others go. Hubbard told a great truth when he said:

"Folks who never do any more than they get paid for, never get paid for any more than they do."

The McCumber Grain Inspection Act is a good measure and if once put in force would help the farmers of all parts of our country. The juggling of grades would be largely done away with and corrupt practices would be broken up. Grains would then be graded on the true bases, their flour producing and bread making qualities, for men would then be trained for this purpose. Science and not politics would come to the aid of the farmers and millers.

We are told of a few places when the farmers were charged 50 to 60 cents per pound for formaldehyde. This is a disgrace and reflects no credit on a dishonest dealer. There is no place in the state where formaldehyde should retail at more than 35 cents per pound of full sixteen ounces. It can be sold at 25 cents at a good profit. If druggist and dealers continue this practice you must expect the farmer to handle the product thru the farmers' elevators, clubs, etc. It is this class of dealers who aid in developing the catalog house and then complain because they can not work their graft. It serves them right.

Along with wheat growing, dairying should become the second great agricultural industry of the state. Agriculturally we should be known as the great wheat producing and dairying state of the country. Commercially we should be known as the great flour and butter producing section of the country. To grow the wheat would keep our farmers engaged in the summer and to transform the crop into a merchantable commodity would bring the milling industry largely to our state. Changing the wheat to flour would give a large amount

of feed and dairying would rapidly develop. To change the feed and butter would mean winter as well as summer work on the farm and give employment all the year.

The large bonanza farm is a curse and not a blessing to any community. When the great Red River Valley is rid of the last of them and there is a family living upon and cultivating each quarter section then shall we see a great and prosperous commonwealth in the Valley itself with teaming millions and prosperous towns, hamlets and cities—the greatest agricultural community in the country. Then Fargo and Grand Forks will have a half million people and flourishing industries to keep her people busy and to make demands for the products produced in other parts of the state.

#### FARM PRODUCTS OF 1907

The question is frequently asked us with regard to the area under cultivation in various farm crops of the state, and the amount produced for any given year. From the Report of the Bureau of Statistics of the Department of Agriculture, Washington, D. C., we gather the following for some of the leading crops produced in North Dakota in 1907:

	Acreage	Yield	Bus. prod.
		per A.	
Corn	154,000	20	3,080,000
Wheat	5,513,000	10	55,130,000
Oats	1,320,000	24.5	32,340,000
Barley	850,000	18.3	15,646,000
Flaxseed	1,700,000	8	13,602,000
Potatoes	27,000	89	2,403,000

The total value placed upon these crops by the Department is approximately \$87,000,000. The wheat yield for 1907 is exceptionally low or, approximately, 17,000,000 bushels less than reported for 1906. This low wheat yield is due to the bad season and early frosts which prevented earlier maturing of the late sown wheat.

#### TUBERCULOSIS GERMS IN BUTTER

The danger from tuberculosis germs in butter is pointed out in a publication just issued as Circular 127 of the Bureau of Animal Industry, U. S. Department of Agriculture. This circular reports experiments made by Dr. E. C. Schroeder and Mr. W. E. Cotton at the Bureau Experiment Station. Butter was made from the milk of a tuberculous cow, and after being kept for different lengths of time it was inoculated into more than 50 guinea pigs in order to determine how long the germs live and retain their virulence in butter. With the exception of five that died prematurely from other causes and one that was killed, all the guinea pigs died of generalized

tuberculosis, and the one that was killed was also found affected.

The results of these experiments prove conclusively that tubercle bacilli may live and retain their virulence in ordinary salted butter practically four and a half months or even longer, and they give new evidence of the danger from the use of tuberculous cows for dairy purposes.

#### COAL TAR COLORS IN BUTTER

Coal tar colors have been used very generally in the manufacture of butter for the past fifteen or twenty years. There has always been in the mind of many people a prejudice against the use of these colors in any food product, and it has repeatedly been proven that the colors used in many instances are far from harmless; in fact, they have been proven to be poisonous.

On the other hand, there are coal tar colors that, when properly made, are without serious effects, and, if colors were permissible to be used, might safely be used could we always be sure that these particular colors were employed.

Under the National Food and Drug Law, the following decision has been published:

"The use in food, for any purpose, of any mineral dye or any coal tar dye, except those coal tar dyes hereafter listed, will be grounds for prosecution."

Now, the colors which have been used heretofore in coloring butter are not the coal tar dyes listed by the Department of Agriculture. The National Law relates to inter-state commerce and, therefore, it applies to all butter manufactured in the creameries in this state and shipped out of the state; it applies with equal force to all butters produced by the farmers, or dairymen and shipped outside of the state. And parties using coal tar dye, such as has been used in the past in butter coloring, will stand chances of prosecution under the National Law.

Our State Law, also, forbids the use of coal tar dye in any food product, whatsoever. There is nothing in our law which would prevent the use of harmless coloring matter in butter, but it would seem that the time has come when it would be better to prepare the butter without the use of colors. If color is to be used, pure, vegetable color must be employed, and if butters containing coal tar dyes are liable to be classed as illegal under the laws of the state, as well as the butters which are shipped out of the state, the chances are that the parties using the same may have to defend a case of action in the United States Court.



## AT THE AGRICULTURAL COLLEGE.

A summer school for teachers will be held at the college this year. A special announcement will be made later.

By a recent action of the faculty the Wahpeton State Science School has become affiliated with the A. C., and graduates from it will be able to enter the A. C. as juniors.

The April number of the monthly Extension has recently come off the press, and contains some timely topics of interest to our North Dakota citizens. It is free on application.

The class in assaying and metalurgy, which meets every afternoon, is making tests of different ores for gold, copper, iron, zinc, and silver. The separations are made by the furnace method.

The new college catalog for 1908-1909 has recently been sent to press. It contains several new departments, and presents the advantages of the school in a convincing way. The catalog is free on application.

General spring work has been started in the fields of the College, and the campus is being cleaned of the rubbish of winter. Attention is being given trees and vines, and it is proposed to set out more trees and hedges as soon as the ground can be safely worked.

The college flour mill makes milling and baking tests of flours from different wheats, Macaroni wheat being given considerable attention lately. The mill will be of service to farmers who wish to know the relative milling and baking value of their wheat. Prof. Ladd has general charge of the mill, and Mr. Sanderson, an experienced miller, operates it.

Mr. Freeman Harris of Kenmare sent Mr. Dynes of the Poultry Division a rather ingenious device in the form of an incubator alarm. The contrivance consists of an electric bell and appliances which may be so attached to the incubator heat regulating device that notice is given when the incubator is either too hot or too cold.

W. R. Porter, superintendent of the twelve demonstration farms located over the state, has made his first round of inspection and reports promising results from the work already undertaken. These demonstration farms are intended to show farmers the advantage of good seed, proper rotation of crops, proper cultivation and the use of fertilizers.

Superintendent Hoverstad and Prof. Churchill have returned to the College after a strenuous farmers' institute campaign the past winter. They report that never before were the meetings so well attended, nor was there ever so much interest in institutes as the past season. After a short rest the institute force will resume the short summer campaign which begins in June.

There are fifteen members in the class in elementary agriculture, fourteen of whom are girls, and they appear very much interested in their work. The subject is presented by lectures in addition to the text book, and so given as to enable a student to get a fair insight into the practical phases of agriculture. The great demand for teachers trained in this line makes this work all the more important and interesting.

Mr. Ray Babcock, who graduates this spring from the regular agricultural course, has been appointed assistant dry land plant breeder at the new Williston sub-station. Besides the regular station work, Mr. Babcock will go to Washington each winter, where a congress of station plant breeders meet, to discuss and study their special line of work. He will assume his duties immediately after commencement.

Prof. Ladd has returned from a hurried business trip to Washington, where he was called before a committee of Congress for consultation in regard to the National Paint Bill, which is modeled after the North Dakota Paint law, framed by Prof. Ladd and introduced by Representative Marshall. The Professor paid visits to several government laboratories where investigations are being carried on with bleached flour.

Dean Shepperd has prepared plans for a new ten thousand dollar seed house to

be built next summer. The building will be a two story brick structure equipped with the latest machinery and will contain a drying room, seed-treating room, and metal-lined grain bins, with a root cellar underneath. The appropriation is to be expended in the following manner: eight thousand dollars for the building, and two thousand for equipment.

Prof. Bolley has received many letters inquiring whether the addition of salt to formaldehyde solution for grain dipping is harmful or not. A number of tests have been made by the department in the past ten years, and it has been found that when enough salt has been added to float kinghead and wild oats seed, the grain in most cases has been killed. Therefore the department is unable to recommend the use of salt on seed grain for any purpose.

The Superintendent of the Northern Pacific Railroad Company visited Professor Waldron last week to confer concerning the planting of willow hedges, etc., along the line of the railroad to act as snow breaks. On examination of the golden Russian willow hedges at the College, the superintendent decided that they will make effectual snow fences and be more durable and economical than the present fences, which deteriorate in value 10% each year.

The experiments to be carried out at the new Williston experiment station have been made out. Dry land farming and irrigation will be given considerable attention. The new station will be under the direction of the College Staff and in cooperation with the U. S. Department of Agriculture. Fifty or sixty acres of land have already been put under ditch for irrigation and dry land plant breeding is being installed. The experiments at this station will prove of the greatest benefit to that large portion of our state which is semi-arid.

See Personal on Page 3.

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721 Third Street, Milwaukee, Wisconsin



# FROM THE NATION'S CAPITOL

By GUY E. MITCHELL

## CONSERVATION OF NATURAL RESOURCES

Special Correspondent—

Washington, D. C., April 30, 1908.

The meeting of Governors and other distinguished delegates which the President has called for May 13-15, for the consideration of the conservation of our natural resources promises to be of the most vital importance to the nation, and is expected to be the biggest event at Washington of the year. America has been most munificently endowed by nature with great resources, our forests, our streams, our minerals and our rich soil, and upon these have been built the greatest prosperity of the greatest nation which the world has ever seen; but as the President says in his invitation to the Governors, our waste of these has been so great as our use and the near exhaustion of some of these resources warns us that it is time to take an accounting and determine upon measures for the conservation of what remains. The subject is so vast that the three days' session of the convention will be able to deal only to a great extent in generalities, leaving details to be worked out by careful investigation; but if the meeting succeeds in awakening a public interest in the subject and shapes up any progressive policy for the states or the nation to pursue, much good will have been accomplished.

### The Inland Waterways Commission

As a sort of preliminary to this meeting, the President last year appointed the Inland Waterways Commission with instructions to investigate all the great subjects connected with the conservation or utilization of this greatest natural resource, water. As part of or intimately associated with the water problem are the questions of internal navigation, swamp drainage, flood prevention, irrigation, forestry, in fact the consideration of any of our great natural resources leads immediately to the others. For instance, stream flow is vitally affected by forest preservation at the stream sources to prevent erosion, and the coal supply is closely related to the timber supply and also the waterpower question. The more water power that can be developed for use electrically, the less coal will be needed for power generation which such an apparently remote subject as cement production immediately affects the demand or supply of construction timbers, since concrete buildings are coming more and more into use.

Undoubtedly our greatest latent resource today lies in intelligent stream management and a supplemental finding of the Inland Waterways Com-

mission on this subject will attract wide attention at the coming convention. It is a somewhat revolutionary proposition, nothing more or less than the practical abandonment of the time-honored method of levee building and dredging of the lower rivers in aid of navigation, and substituting in large measure therefor, reservoir building at the headwaters of the tributaries of the great rivers, thus storing sufficient flood waters to keep the rivers down below the danger lines, while during the low-water period of the year this stored water would be let down to increase the river flow.

### To Benefit Agricultural Lands

This taken in connection with forest preservation to prevent erosion and silting up of the rivers would place our rivers under absolute control, prevent vast flood losses to the agricultural lowlands, provide better navigation than can ever be accomplished otherwise and create a high water-power development which should run every industry of the country. The idea is not a theory; it is a practical plan which has been worked out from surveys made of natural mountain reservoir sites and from studies of river flows, by the Geological Survey. While not an agricultural project the application of this policy to the entire river system of the country would be of the vastest benefit to the nation as a whole. Incidentally it would prevent the overflow annually or biennially of great tracts of rich bottom lands which are now precariously farmed or else wholly neglected. The man who has worked out this plan is M. O. Leighton, the chief hydrographer of the Geological Survey. A glance at the map of the United States will show the great strain which is placed upon our large rivers during any period of flood, thru the immense territory that a few of them have to drain. The fact that ample reservoir facilities have been determined in the mountains to store the excess flood waters offers a complete solution of the problems of floods and river navigation. The work would be costly but the benefits would be commensurate, and possibly the outlay would not be even as great as that contemplated thru our present plan for river work as carried out by the Army engineers, where the cost of continual dredging to remove flood silt and levee and other maintenance costs are enormous.

### Pure Food for Animals

The government's pure food administration is considering whether the food act warrants regulations affecting the purity of foods for domestic animals. It would seem that it does; if not, that the law should be amended. For in-

stance, should the farmer feed his horses condiment powders or the hens egg-laying stimulants without knowing as much about their composition as he does about the medicines he buys for his own family? Doctor Wiley believes that the law covers foods and drugs for farm animals and the pure food board of the Department of Agriculture intends to extend its wing over them. If the manufacturers don't like the idea of being compelled to furnish Dobbins and Boss with as honest articles of diet as they have to for the owner, why they can contest the matter, and even if they take it all the way to the Supreme Court of the land, the government food experts will stay with them.

A great shout of exultation to the effect was raised recently over the announcement of the appointment by the President of a pure food board of appeal from the Department of Agriculture administrative pure food board, of which Doctor Wiley is chairman. The appointment of this appeal board was the result of the Department's insistence that food should be "pure," whether great manufacturing industries were affected or not. For one thing Doctor Wiley's board stoutly maintained that benzoate of soda was hurtful to the stomach and that .001 was all that could be safely put into pies, relishes, catsups, etc. The use of sulphur and saccharine was also limited by the Department beyond what the food producers considered necessary. So a supreme court of food scientific professors has been appointed to review these and other mooted questions. This is perfectly proper and is not objected to in the least by the Department. It in fact relieves the Department, and Doctor Wiley, as its chief food expert, from any criticism that the foodmixers might want to make to the effect that the law was being narrowly construed and too much power left to the discretion of one office. The appointment of this final tribunal (before the last appeal to the courts), consisting of eminent scientists from Johns Hopkins University, Yale, the University of California, the Chicago University and the College of Physicians and Surgeons of New York is not likely to result in much greater latitude in food adulteration than has been the limit set by the Department of Agriculture.

In planting small seeds which have difficulty in breaking ground it is a common and good practice to mix a few radish seeds to assist the weaker seeds in pushing thru the crust.

### Diseases of Fowl—The Chicken Mite

One of the most formidable enemies of chickens is unquestionably the chicken mite. Observations have demonstrated



that fowls infested with mites are exceedingly unprofitable. The cost of keeping them is increased, and the income from them is very much reduced; indeed, when very badly infested, they are totally incapacitated for performing work. The hen will cease laying. The ovaries undergo atrophy, and on autopsy will be found shrunk, and in a condition unsuitable for work. In several flocks on which observations were made, it was found that egg production was greatly reduced or altogether prevented during the spring and summer, when, under normal conditions, it would have been at its height. Hatching hens will often either die on the nest as a result of the mite infestation, or will leave their eggs, literally driven away by the vast hordes of mites which accumulate upon them. Another very important feature of the evil effects of mites is the injury they do to newly-born chicks. If the hen survives the ordeal to which she is subjected while hatching, the young chicks are attacked by the mites in great swarms as soon as they leave the protection of the shell, and as a rule the majority of them will succumb. In addition to the sucking of blood, the mites reduce the vitality of the fowls by biting them and disturbing their rest at night. The birds require more food, and are at the same time incapable of converting it into tissue and energy as would be done by healthy fowls.

The mites while commonly called an insect is in reality a parasite. It is peculiar and stealthy in its habits of life, rather unlike that which one naturally expects from a parasite. Indeed it is only semi-parasitic, and as a rule remains upon the fowl only long enough to secure a meal, and is very active in its movements, and seems to be ever on the lookout for a victim.

For methods for the extermination of the mites have been tried but it is believed that kerosene emulsion is the most efficacious as it kills not only the mites themselves but also their eggs when it comes into contact with them. In spraying with this emulsion care should be taken to direct the spray into all crevices, holes, joints, and other hiding and breeding places of the mites. The first spray of kerosene emulsion will kill within five minutes all of the mites and eggs with which it comes into contact; but many mites will be left in the hiding places unaffected by the spray. The spraying should therefore be repeated as soon as the first spraying is completed, and a third spraying as soon as the second is completed. At each repetition the beginning should be made at the same place and the same order followed as in the first. These three sprayings done in one day and in rapid succession will destroy nearly all of the

mites, but, as experiments have shown, many eggs are left in places untouched by the spray. If these were allowed to go undisturbed it would not be long ere the building would be as badly infested as at the beginning. Therefore the spraying should be repeated every three or four days, spraying two or three times on each occasion for about two weeks.

#### Rotating Horseless Plow

The Rural Engineering section of the Department of Agriculture has received a report on a very unusual type of plow which instead of turning the soil, bores it. The ordinary plowshare is replaced by a pair of auger-like screws which precede the machine and are rotated in opposite directions with respect to each other as the machine moves forward. The machine is run by a gasoline motor and is self-propelling. It is claimed to possess certain advantages in giving the soil a more thorough stirring than is possible with the ordinary plow. In a 10-hour day it is claimed that 2.5 acres may be plowed to a depth of 8 inches in compact soil at a total expense of about \$4 with gasoline at a price of 20 cents a gallon.

#### Judiciary Committee Needs Farmer Members

The report of the Judiciary Committee of the House of Representatives to the effect that the Appalachian bill is unconstitutional is a severe blow to a proposed conservation measure of great import to the eastern half of the United States. The chairman of the committee disposed of the matter summarily on the assumption that the measure was purely in the interests of forestry, denying in effect that forest denudation and consequent soil wash and erosion had anything to do with river flow or floods, and that therefore the question was not interstate in character and such a one as the federal government was warranted in touching. It would be interesting to see how this matter would be disposed of by the United States Supreme Court if it were the function of that body to pass down opinions on the constitutionality of proposed legislation as was done recently by the Supreme Court of the state of Maine, in answer to a request from the Maine legislature for an opinion on the right of the state to enact a law prohibiting private forest owners from destroying their forests where such action would result in soil erosion and the filling of rivers with silt. The ground squarely taken by Maine's highest court was that the state had such a right to provide for forest regulation where it was in the interest of the general welfare which was always predominant over the interests of the private

owner. The Judiciary Committee of the House of Representatives at Washington to the contrary notwithstanding, it is the almost general opinion, and which amounts to an established fact, that forest protection conserves water, regulates stream flow, and prevents soil wash from filling up rivers, and is therefore an interstate matter. Vast areas in foreign countries have been absolutely ruined and abandoned and are today desert because of forest denudation. The forest is a huge sponge which absorbs the rainfall and then lets it ooze away slowly, keeping a more or less constant stream flow, whereas denuded slopes pour their waters down in a huge torrent, causing destructive floods, to be followed shortly by a dry stream bed. Every farmer is familiar with this principle which applies on a small scale to every lead or little gully flowing thru his field or pasture and emptying into a swale ditch.

If those members of the committee who can see nothing in an Appalachian forestry preservation policy would travel thru the far western states, they would have ample evidence right in their own country of the disasters to agriculture that follow forest denudation and they would be compelled to realize that similar conditions will ensue in all the valleys of the Appalachian region if the present rate of forest destruction continues for a few decades.

As the opinion of the Maine tribunal is considered one of the broadest decisions recently emanating from a state, so the report of the House Judiciary Committee is looked upon as going to the extreme of narrowness and illiberality.

#### Apple the King of Fruit

"The apple is the 'king of fruits,' wherever it may be successfully grown, and from the hygienic standpoint it has few if any real rivals among cultivated fruits," remarked Col. G. B. Brackett, the Pomologist of the Department of Agriculture. Col. Brackett has been the apple expert of the government for many years, and his judgment in identifying specimens of closely related varieties or in determining whether alleged new varieties are merely slight variations or frauds—old kinds masquerading under new, high sounding names—is perhaps second to that of no one in the country.

The United States is the land of the red apple. In most foreign countries the red kinds are in disfavor. For instance, in Germany, the red apples are of poor quality and it is a surprise to German fruit men to learn that there is such a thing as a good red apple, less and less of a surprise however, year by



year, since our apples are getting into all foreign markets. Of course there are many excellent and unsurpassed varieties of apples which are not red nor even tinged with red but there are probably five red and pink apples sold to one of all other colors.

"One of the most common mistakes made by the apple grower," said Col. Brackett, "is in planting too many varieties. Having obtained a list of varieties that have been found by actual experience to be adapted to the locality where the orchard is to be planted, a careful selection from this list, of a very few of the best should be made, the fewer the better, providing the varieties chosen are such as will meet the requirements in all points.

"Out of a list of ten or fifteen varieties there must, of course, be a few superior to the others in desirable qualities. If so, why plant the less desirable ones? The fewer the number of varieties the less will be the trouble and expense in handling the crop."

"What would you say, speaking generally for the United States, to be the favorite apples?"

"Well now, every locality has its favorite apple or apples, which have been well tried out. The grower should hesitate about planting an orchard to new or highly advertised kinds which are not known to be good producers and otherwise desirable in his particular section; but in the list of varieties which are generally recognized as leaders, commercially, the most prominent and most widely grown are perhaps the Baldwin, Ben Davis, Jonathan, Northern Spy, Rhode Island Greening, Roxbury, Tompkins King, Winesap, Yellow Newtown and York Imperial. All of these are grown more or less extensively in the various sections of the country to which they are adapted."

#### Muzzling Dogs Against Rabies

Dr. A. D. Melvin, chief of the Bureau of Animal Industry, has recommended to the Commissioners of the District of Columbia that they issue an order requiring that all dogs in the District be muzzled for a period of four months.

Dr. Melvin says there have been sixty-three cases of supposed rabies reported to the Bureau and upon examination it was conclusively proven that more than 75 per cent of these were infected.

Quite a contention arose some time ago between the Bureau and a Washington newspaper as to the existence of rabies, the paper claiming that there was no such disease. The Bureau of Animal Industry men believe otherwise.

#### The Free Seed Hemorrhage

The great annual free seed outburst is now in full blast, the southern states first getting their quotas of radish,

cabbage, turnip, beet and other rare seeds "on trial"—(Please report results.) This Congressional seed distribution is being handled by the Department much better than in years past, all the lots of seeds now being tested, both for germination and for purity, and the Secretary holds out enough money from the contract price to inflict on the dealers, if necessary, the penalty prescribed by him in case the seeds do not meet the requirements.

#### Senator Tillman's Hog Killing

One day recently Senator Tillman made a dash out of the Senate Chamber for the telegraph office. The weather forecaster who draws an elaborate map of the weather for the whole country every morning and stays in the Marble Room of the Senate to explain the chart of all kinds of meteorological conditions, had just sent the South Carolinian some welcome tidings.

The Senator's dispatch read: "Kill the hogs right away. No time to lose."

It was to the manager of his big plantation at Trenton, S. C. The Senator says the best days for the work are when there are heavy frosts. So he has the weather prophet watch for the coming of frost, and the report that a few frosty nights were at hand impelled the Senator to the telegraph office.

#### Horse Forty Years Old

S. S. Stafford, secretary of the Home of Rest for Horses in London, reports that there is at that refuge for equines a horse nearly forty years old. His name is Gamecock, and he is the property of Gen. Murray Miller. Another famous one is the old charger, Miss Sylvester, the property of Col. Fludyer. On New Year's Day a special meal for the horses was given them. There are seventy-three in the home.

#### Keep the Grindstone True

The average grindstone on the farm sees pretty tough times. The softer the stone, the harder usage it receives. Its lot is almost as hard as that of the "boy on the farm," who has to turn it by the hour. The grinding surface of the stone is more apt to be concave than it is to have an even face, or slightly beveled surface. The concave condition comes from grinding axes, scythes, machine knives, etc., with their edges lengthwise of the stone instead of across it. This cannot be helped in grinding some tools. But when the stone does assume this shape, making it impossible to grind a chisel, or any flat-edged tool decently, it is a good time to get a spade or two—spades are usually dull—and hold them on the stone until it is sharp, when the irregularities in the surface of the stone will have disappeared.

A grindstone, by the way, should never be left exposed to the sun. The

weight of the handle will always cause one portion of the stone to remain uppermost, and this from exposure will reach a different degree of hardness from the underside, so that after a while the stone will be ground out of a circle. If the stone has to stand in the open, a flat box can easily be obtained to serve as a cover.

#### Feeding Better Indian Corn

The National Corn Growers' Association expects to undertake a vigorous campaign during the coming season in the interests of better corn yields. Altho the first staple to be grown in America, there is perhaps no present crop which shows such average poor results as compared with its possibilities and there is certainly no crop upon which so much attention has been lavished during the past two or three years in an effort to bring up this average to a decent figure. The objects for which the Association will work are the encouraging, disseminating information regarding the best methods of soil culture and farm management for corn, encouraging the holding of a national corn exposition annually by stimulating interest in corn culture in undeveloped territory, unifying methods and standards of corn judging so far as possible, securing the adoption of uniform classification for corn exhibits and rules governing exhibits, encouraging the development and uses of corn products, and opening up home and foreign markets, thru education regarding the use of Indian corn and corn products as food for man and beast.

Many reports have been received by the Bureau of Animal Industry on the use of worthless tuberculin so that now this product is inspected by the chemists of the Bureau.

Grain weevils have been found to live for a year in small tubes partly filled with wheat.

Where snails and slugs are a nuisance, it is recommended to scatter dry powdered lime on plants so that they will come in contact with it. The lime dust sets up a fatal irritation.

A Scandinavian translation noted by the Department of Agriculture states that 150 pounds of mixed birch and poplar (or aspen) leaves are equal as a sheep feed to 100 of good meadow hay. The leaves contain 13% protein and about 65% of carbohydrates.

In spinach the male and female flowers are produced on different plants.

**All Boys Interested in Corn Culture Contest Should Read Personal on Page 3.**



# Home Affairs

Katherine C. Neilson, Editor

Pioneer women of North Dakota have an experienced fact to expound. Never clean house in this state of big fields until the grains and grasses are green. Large fields by driving winds produce dust storms, which are a menace to house-keepers in particular. Even storm-doors and windows are better on than off if there are heavy dust storms.

For the benefit of busy women on the farm who have to prepare hearty and substantial dinners, the following receipts will be found convenient.

On a busy forenoon, fill the stove oven with savory food like baked beans, brown bread and Indian pudding, all cooked in the same temperature, and ready to place on the table with something left to apply on the following meal. This ready-made dinner was adopted by our mothers and grandmothers of New England on Mondays, when daughters assisted their mothers; also on days when country aunts and cousins flocked to town to attend the celebrations or county fairs.

No one member of the household was expected to stay at home and wait upon visitors, so called. The brown bread was never omitted the year round. That class of food was plain, wholesome and Pure Food, and seems to live in the memories of each generation. There must be some pleasant and enduring features in "Olde Tyme" viands to have so distinguished a list in the culinary art. We notice the material was home-grown and all the better for that and prepared for use in bulk, not paper packages.

Food was grown on the farm—manufactured by the same manager and the artist, who cooked it was queen of the ranch, manse, or plantation. At least it was under her superior supervision and was, with her, a practical art.

Where did she acquire this skill? Not at a public cooking school. Oh! no, but in the private home-school of a notable dame, whose heritage is worthy of investigation and whose daughters did not ignore the art of living well and keeping well. These grand dames were not schooled in the science of germs. It was not necessary. They were so very thoro and cleanly, germs had not a habitation under their regimen. It was a latter date that found the germs.

Boys Interested in Corn Culture Contests Should Read Personal on Page 3.

## BAKED BEANS, BROWN BREAD AND BAKED INDIAN PUDDING

Wash two quarts of navy beans, put them soaking at night in warm water. In the morning, add one teaspoon of saleratus and let them come to a boil; then strain off the water which is brown and strong of the beans.

Place the beans back in the kettle, add one tablespoon of molasses to each quart of beans, pour over hot water enough to more than cover the beans, let them boil until the skin bursts, but do not boil until the beans will mash, or they will not keep their shape. If you want them sweeter add sugar and salt to taste. Place in the middle just under the surface of beans one-half pound of salt pork, scalded and scored on the rind side which will brown with the beans. Bacon sliced flavors them, a piece of salted or fresh beef is an improvement, cover the beans and bake from five to eight hours, putting in water when they get too dry.

Never Use Hard water

### Brown Bread

Three cups of sour milk, one-half cup of molasses, one cup of sugar; salt; two teaspoons of saleratus; cornmeal and graham flour, one-half of each. Mix with the hand to get it even. Have it thick enough to drop not thin to run. Bake in two tomato cans or in a five-

pound lard pail, which is nearer the original size and shape of the Boston loaves. Cover and place in a pan of hot water in the oven, let it bake with the beans three or four hours. The last hour it is nicely browned by taking it from the pan of water and leaving in the oven. Serve warm with beans.

This same formula with a few raisins makes a fine steamed Indian Pudding, served with a rich sauce of butter and sugar or sweet cream, nutmeg and sugar.

### Baked Indian Pudding

Put into a tin pail two quarts of sweet milk, and set the pail into a kettle of hot water. Dip out about one cup of the cool milk and let the remainder become hot.

Rub smooth in the cup of cold milk five spoons of corn meal, three spoons of flour, one teaspoon of ginger; salt and a little molasses, and sugar to taste.

When the milk is scalding add this smooth mixture and stir until it begins to cook and thicken. (If you do not cook this the meal and flour will settle to the bottom while baking). Have a pudding dish well greased and pour in this mixture. Let it bake slowly for two hours, uncovered.

It can be stirred while baking without injury. If you wish to slice in apples the last hour it is a great improvement. Raisins improve it also. If you think it will be thicker than you wish, pour over some cream or milk while it is cooking. To be served hot with butter. This is a dessert after baked beans. All of these need a steady oven.

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Before submitting to an operation, or going to a Hospital, or Hot Springs, consult a reliable Specialist. Get cured at home cheaply, by our mail order system. Personal interview not necessary. If troubled with Nervous or Chronic Diseases of the Nose, Throat, Stomach, Liver, Bowels, Kidneys, Bladder, Catarrh, Skin Diseases, Exema, Acne, Rheumatism, Scrofula, Neuralgia, Sick headache and Vomiting, Billiousness, Dizziness, Heart Disease, Backache, Varicocele, Nervous Debility, Lung Troubles, Female Weakness, Spinal Disease, Paralysis, Epilepsy, Dyspepsia, General Debility, Hysteria, ask for our Free Examination blank and find out whether or not your ailment can be cured. Address, Dr. J. C. R. CHAREST, Huntington Block, 106 Broadway, Fargo, N. D. Therapeutic Specialist.



**Creamed Brown Bread Toast**

Place on a pan slices of brown bread and toast in a hot oven on the grate.

While toasting, have a frying pan with sweet cream ready to lay the toast in, and simmer a few minutes. Salt a little and serve with jelly.

This is "Olde Tyme" Cream Toast. Colonial Dames made it.

One woman asks how to clean the heavy rugs, size 15×18 feet, when there is no man to whip them.

It is an injury to any heavy rug to hang it over a bar or line and whip and pound it. Fold or roll it in the room, draw it onto the clean grass, wrong side up. Sweep this side which has the least dirt entirely clean, then turn it over, sprinkle with barrel salt and sweep clean, the salt is cleansing and brightens the colors. Rugs that are heavy and pounded on a line are liable to have broken stitches and soon rip.

Naptha soap and a brush will cleanse the soiled spots.

**WHO HAS A BREAD MIXER?**

It mixes bread in from three to five minutes, always ask for the book of directions. After studying it, use your best judgment if you are a cook. Remember, this is a mixer only, and does the work quickly; is a sanitary worker, and it is a relief to mix it without being immersed in dough to your wrists. You are not stuck with dough so you cannot answer the door bell and shake hands. A boy can turn it as well as play ball. All housekeepers should have one and save time.

**WHAT DOES IT COST TO RAISE A BOY**

The Hope Farm correspondent of the Rural New Yorker says that it sometimes costs twenty-five thousand dollars to raise a boy down east up to the point where he can make his own living. Fact; says he has the figures for it; that he has submitted this to men who have raised that kind of boys, and they tell him it is too low.

We don't doubt it. You can spend all the money you want to on a boy, and most boys will spend about all you give them. We can do better than that out west. We have known farmers on eighty acres raise half a dozen boys and girls up to a point where they could look after themselves, and do it well, and they did not seem to be any poorer for it, either. Why, we have known preachers to raise eight or ten boys and girls, send them to college, and start them out in pretty good shape preaching, teaching, or keeping house for some good fellow, and do it all on a salary of less than a thousand dollars a year. Boys and

girls raised in this way are worth raising, are the bone and sinew of the country; while this Hope Farm man tells us that he has seen some of these expensively raised boys hired at ten or twelve dollars a week, and dear at that.

It is worth thinking about, however. What is it costing you to raise your boys? Better still: What did it cost to raise you? You cannot raise boys as cheaply now as you were raised. The cost of living is higher, which means that a dollar is not worth as much and, therefore, it takes more of them. Still, it is worth while to ask: What did it cost to raise you?

It will cheapen the boy's raising if you will not do anything for him that he can do for himself. It will not only cheapen the cost, but the boy will be worth a good deal more when he is raised. There are boys and boys; boys that are worth many, many times their weight in gold; other boys that are worth their weight in silver; and still other boys that are not worth their weight in copper.

In raising boys, as in raising stock there is a good deal in blood, breeding, heredity, and there is a good deal in environment. The boy is not to blame for his breeding; you are responsible for that and also chiefly responsible for his environment. A mistake in heredity cannot be helped. Environment can be improved, but only with the help of the boy himself. Tell us what it cost you to raise the boy. Time will tell whether he is worth the money. If you are worth what it cost to raise you, the boy probably will be also.

**FROM THE OLD TO THE NEW**

O. O. Churchill, Sec. Hor. Soc.

Probably few people in North Dakota realize the wonderful change in agricultural thought taking place thruout the state. Farming methods seem to be in that transition period between the old one crop system of the pioneer settler and the diversified practices which have proved most successful on older lands.

This fact has been constantly brought to the attention of the institute speakers as they came before the different audiences. Only three or four years ago the questions and discussions by the audience showed the whole trend of thought to bear directly upon grain growing. This year practically all the questions relate to clover, alfalfa, and to horticulture.

Why this transition is going on so rapidly, it would be hard to state, yet it should be a very welcome one. Trees and fruit can be grown everywhere in the state without any great expenditure of either time or money. Why, then, should any farm home be without them?

One man aptly remarked, "I thought I did not have time to wait for trees to grow, but I have waited just as long as if they had been growing," and I might add, it seemed much longer. Several men at different points have stated that red raspberries grow like weeds, meaning that they are difficult to eradicate. Strawberries and other native fruit may be found growing naturally over large parts of the state. Very little trouble seems to have been met in growing gooseberries and currants. Who can predict where this movement will end? It will be interesting to note the development in the future.

## Time Insurance.

Is your time worth anything! Of course, it is, as men are scarce and wages are high.

The only way you can be sure about it, is to get one of our policies which will pay you for your time when you are laid up from

## Sickness or Accident.

Write us for a sample policy.

# The Hatcher Brothers Corporation,

Telephone 1400

Edwards Block,

FARGO, N. D.

We want agents in every town in the northwest.



## Pure Food Department.

All Matters Pertaining to Foods will be Discussed in this Department

### PRESERVATIVES DANGEROUS

Those who have carefully looked into the effect of chemical preservatives upon health are generally agreed that they are dangerous and that their use should be prohibited. We have maintained that it is not the duty of the Food Department to determine the harmfulness of any ingredient, but, rather, it is the duty of every man, who would introduce an active preservative in food products, to demonstrate to the world at large that this product is entirely harmless.

With regard to the effect of food preservatives, Hon. James Foust, Dairy and Food Commissioner of Pennsylvania makes the following statement:

"Most of the recognized preservatives used by manufacturers of products act upon the living organism in much the same way the undertaker's embalming fluid acts upon the tissues of the dead body. They harden the arteries, arrest the processes of digestion, set in motion forces that injure the health and shorten the life of the unconscious victim. For that reason the state which prohibits the use of preservatives does wisely and the consumer who declines to use articles of food containing them takes steps to lengthen his life.

### ADULTERATION OF FOOD PRODUCTS

Here is the way the Pennsylvania Food Authorities look at the matter of adulteration:

"Every article of food that contains an adulterant, put in it for the purpose of enabling the manufacturer to make a larger profit or to meet the demand for a cheap product, costs the consumer more in the end than the purer or costlier article. A gentleman who has had some experience in eastern travel tells of a company of adventurers who wandered in a desert country for many days. They fed upon a plant which grew by the way and which satisfied the demands of appetite. But it was destitute of nutriment so that when they again staggered into civilization they were within an ace of starvation. That's the way most adulterated foods act. They satisfy the appetite but they do not nourish the body or feed the blood.

All Boys Interested in Corn Culture Contest Should Read Personal on Page 3.

### BAD FOOD MORALS

"One can scarcely wonder at the persistence of those selfishly interested in the preparation of food products in the cheapest possible way that will make them look well to the consumer. It is a matter of business with them. They are not bothering about the health of their patrons. That is the lookout of the patrons. They want to produce their goods at the lowest possible rate that they may either undersell competitors or have a big profit. But what puzzles the observer is that in many instances the consumer actually champions the cause of the manufacturer whose products are destroying stomachs by the score. Only the unscrupulous manufacturer acts in this way; the amazing thing about the whole business is that he receives the moral support of many citizens who ought to be standing by the authorities."—Bulletin, Dairy & Food Division, Pennsylvania.

### NET WEIGHT OF CANNED GOODS

Attention has been previously called to the fact that in Washington and New York the matter of net weight on canned goods and all other food products had received considerable attention. In a recent issue of the Grocers' World appears some further data on this point, and it was found that there was wide variation in the amount contained in the several cans. The size of the cans vary as does the character of the filling of the cans. On this point the Grocer World says:

"There is, as pointed out, no uniformity as to the size of cans used, and even if there were there would be none as to the weight of the filled can, for the reason that the packers fill their cans more or less full, according to their ideas of

honesty and square dealing. The writer has seen during the past week a No. 3 can of tomatoes weighing, can and all, 1½ lbs. The honest packers complain that if they fill their cans honestly full they are compelled to compete with others who, tho using the same sized cans, fill them less full and are, therefore, able to sell for less money."

At the Virginia Department cans were found to contain from 1.91 lbs. to 2.39 lbs of tomatoes.

Pennsylvania is considering a bill to be introduced at the next session of the legislature requiring net weight to appear upon all package goods. This will be along the line of the North Dakota idea, and shows that after all other states are gradually falling into line demanding that the consumer receive in weight and measure what he pays for.

**WE MAKE CANDIES**  
Of Merit and Quality.

**CONGRESS CANDY CO.,**  
GRAND FORKS, N. D.

WRITE FOR OUR  
**Pure Food Grocery Catalog.**  
**FARMERS' SUPPLY HOUSE,**  
 Fargo, - - - North Dakota

**HONEY** Well ripened clover Honey for Sale, guaranteed absolutely pure and of the finest quality. One 30-lb. can 11½¢ per lb.; 2 or more cans 11¢; 12-lb. cans, in full cases of 72 lbs., 11¼¢ per lb. Send for price list. Address  
M. V. FACEY, Preston, Fillmore Co., Minn.

**"Everhart's**  
Candies are  
**PURE."**

Hundreds are using Personal,  
page 3.

**60**  
CUPS FOR  
- 15 CENTS -



**MEAD'S CEREAL BLEND**  
LOOKS LIKE COFFEE } BUT  
TASTES LIKE COFFEE } IS NOT  
SMELLS LIKE COFFEE } COFFEE.

Is a Scientific blend of the Choicest Rye Wheat and Barley Grown, no hulls, chicory or dope in it. Aids digestion and cures dyspepsia. Costs ¾ less than Mocha & Java—is 20 times better. A pound package post paid on receipt of 25 cents. Write for our three special offers. Ask your grocer for it first.

**MINNEAPOLIS CEREAL CO.,**

Coffee Dept.

Agents wanted everywhere. Minneapolis, Minn.

U. S. SERIAL 712



**BLEACHING FLOUR**

A circular letter recently sent out by a miller who is not favorable to bleaching and has not adopted the process in his own mill, contains the following suggestions:

"White flour is the best, most nutritious, all-round food stuff known to man.

This is all right, as we all know; but what we don't always know is, whether the flour was chemically treated to look white, imitating age and fine quality.

Pure middlings flour (high-priced because made from choice wheat by scientific milling) is creamy-white flour. Flour made from the best wheat, when fresh ground, is always slightly yellow and a few weeks age adds to the baking qualities and consequently to the value.

We all know that the highest grade flour in appearance and baking qualities cannot be made out of the whole contents of the wheat berry. There is only a certain proportion of pure middlings flour in any wheat; and this is the best and highest priced flour.

But we also know that there is a modern device by which flour that does not possess the merit of real age and skillful milling from good wheat, and would otherwise be less attractive in color, can be made to resemble the highest grades of flour possessing proper age, and proper color due to the excellence of the wheat and good milling; and this is accomplished by acid fumes, vapors or gases produced by flaming discharges of high-tension electricity—actually, chemical treatment of the wheat product. This process is a commercial success perhaps; and perhaps, again, the bakers share in this commercial success; and, perhaps, again, they do not; and, perhaps, bread eaters are benefited.

Bread eaters admire the chalky whiteness of bread made from denatured flour; but, unfortunately for bakers and millers, they do not eat the bread. They nibble and leave the bread unconsumed on the plate if there is any thing else in sight to satisfy hunger."

**SACCHARINE OR COAL TAR SUGAR**

Again this fraud is demanding attention. More than six years ago saccharin or coal tar sugar in food products to be sold in North Dakota was prohibited. It is a drug and not a food; it has no place in our food products. It has been repeatedly shown that coal tar sugar or saccharin is a disinfectant or poison for bacteria; therefore, it retards digestion which is generally dependent upon the action of the bacteria. It is an antiseptic as well as a sweetener, and the canners of corn desire to use it, first, for its antiseptic properties and for preserving the corn from spoiling and preventing the necessity of properly steril-

izing in preparing the product. They desire to use it for the further reason that it enables them to utilize inferior products and by sweetening it give it the appearance of a superior product. Its use prevents the necessity of cleanliness and sanitary conditions in the factory.

The best American authorities agree that it is harmful, and foreigners prohibit its use. It is used as a substitute for sugar. It has no food value but tends to deceive and does deceive the consumer. But the great question is as to whether it is healthful or not.

It may be said that the addition of any unnecessary chemical to a food or beverage shall not be deemed justifiable or lawful in any product until it has been clearly and satisfactorily proven that the chemical, if found in the food, is entirely harmless, that it does not injure or in any way lessen the food value, and that in its use fraud is not abetted.

A Committee of eminent French physicians have expressed the following opinion:

"First: Saccharin is no food and cannot take the place of sugar.

Second: The addition of saccharin to foods prevents and retards the digestion of starchy or albuminous foods in the digestive organs.

Third: Its addition to foods impairs digestion and favors dyspepsia.

Fourth: The injurious influence of saccharin on nutrition is even now well established, and saccharin should, therefore, be excluded from the diet."

Drs. Mathews and McGuigan of Chicago University have published the results of their investigations, and they conclude that it has a retarding influence on the action of the digestive juices, especially on that of the saliva and pancreas.

They further say: "Its prolonged use would, therefore, tend to produce digestive disorders."

They point out that its use accounts for headache and other symptoms which are well-known. It is a general protoplasmic poison and it retards the fermentative processes of the body.

Why should its use be longer tolerated? Why should we deceive ourselves by believing that a product taken into the system without any food value will furnish any nourishment and, if it is devoid of nourishing qualities, how long can health be maintained even did it not contain harmful or poisonous ingredients? Let us hope that the statements which have emanated from Washington officials are the result of gossip rather than statements of facts.

Hundreds are using Personal,  
page 3.

**BEWARE OF ARTIFICIALLY BLEACHED FLOUR**

Not all the millers are favorable to the bleaching of flour by any means. A miller who has the courage to stand out and manufacture and sell flours without bleaching at the present time has to meet with strong competition from those who are out to deceive. One of the millers who does not believe in bleach; ing recently sent out the following circular:

"As Millers we have a very earnest aversion to seeing flour classed in the category with embalm beef, formaldehyded milk, cold-storage eggs, and boracic-acid-preserved food-stuffs generally.

Wheat flour was and always has been the cheapest and best human food since ages before the Pharaohs of Egypt. We read of some might dubious transactions in all these intervening days; but no historian records that Millers bleached their flours with acid fumes to make it look nice—until the present day. Is not the use of "bleached" flour lessening bread consumption?"

# OUR FIGHT FOR FARMERS

Appreciate the Work?  
WILL YOU SHOW IT?  
"HOW?"

**BOOST!**

By Renewing  
Promptly

By mentioning The  
North Dakota Farmer  
to Advertisers



## Pure Food Advertisers

The products advertised below are in compliance with the pure food law of North Dakota and of the highest grade.  
ASK YOUR GROCER FOR THEM.

"BUY"

"EAT"

### HOME BRAND

Pure Food Products

"ECONOMY" "SATISFACTION"

Griggs, Cooper & Co.

MANUFACTURING  
WHOLESALE  
GROCERS,

ST. PAUL, MINN.

Main Offices:  
CORNER THIRD AND BROADWAY

**GRAND PRIZE**  
(The highest honor)

Awarded to

**DR. PRICE'S**  
DELICIOUS  
**Flavoring**  
**Extracts**

At the

ST. LOUIS  
EXPOSITION.

For sale by all representative grocers.

### "FOR THOSE WHO CARE." **NOKOMIS CANNED GOODS**

ARE

Selected Fruits and Vegetables.

ABSOLUTELY PURE.

Packed with Greatest Care in Sanitary Cans.

**Stone-Ordean-Wells Company,**

WHOLESALE GROCERS.

DULUTH, MINN.

MINOT, N. D.

### RETAILERS PROTECTED

The National Food Law did not take effect until January 1st, 1907; and all goods on hand or receive by you prior to that time, are not affected in any manner by the National Food Law, and will not be, unless shipped from one state into another after the law goes into effect January 1st, 1907.

For your protection, it is necessary that you handle only pure goods, properly labeled within the meaning of this law and we, therefore, call your attention to the fact that food products sold to you by us are not adulterated or misbranded and are all guaranteed to conform to the requirements of all food laws, both State and National. This guarantee protects you from prosecutions under the National Food Law on any food products purchased from us hereafter.

REID, MURDOCH & Co.,

Chicago.

*Libby's*

**Food  
Products**

Canned Meats Pickles Olives  
Preserves etc.

Libby, McNeill & Libby.

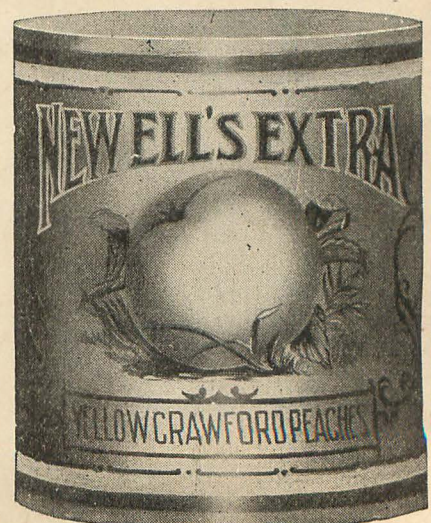
### NEWELL'S EXTRA LINE

Represents the highest quality of food products that can possibly be obtained. Purity and quantity always stand foremost.

**Geo. R. Newell & Co.,**

WHOLESALE GROCERS,

MINNEAPOLIS, - - - MINN.





# Livestock Department

PROF. W. B. RICHARDS, Editor

## A GROWING DEMAND FOR DAIRY CATTLE IN THE STATE

W. B. Richards, A. C., N. D.

During the past year there has been an unusually large number of inquiries for dairy cattle, both milch cows and breeding stock. These inquiries do not seem to be confined to any specific section of the state. It is possible, however, that some localities of the Red River Valley show a greater demand than other portions of the state. A great many farmers are in search of bulls to mate on the grade herd they have. They are desirous of buying pure bred Jersey, Holstein or Guernsey bulls. Others desire to buy some pure bred cows or heifers of these breeds, evidently to form the nucleus of a herd from which to build up a good herd of milk producers. Unfortunately these prospective purchasers find it difficult and impossible in many cases to secure what they desire. There are very few pure bred herds of dairy cattle in the state, and those breeders who have such herds, never have but a very few for sale, and most of the time none for sale, because those that are offered for sale are picked up at once.

There are more pure bred Jerseys bred in the state than any other dairy breed. There are, however, only four or five herds of any size of this famous breed in the state. A few small breeders who have two or three pure bred cows are to be found in different parts of the state, but one cannot expect these men to have anything for sale, except a male occasionally, for they are keeping all their heifers to increase their herds. There are only very few of the popular dairy breed, the Holstein-Friesian in the state. The only herd the writer knew of was that owned by N. S. French, Berlin, N. D., until a few of the enterprising milk producers in the vicinity of New Salem clubbed together and sent their buttermaker to Wisconsin to secure for each of them several pure bred females and a bull. This was done some two years ago and they are experiencing good success with them. It will be some time, however, before these dairymen at New Salem will have anything for sale except now and then a male calf. This was a very worthy move on the part of these farmers of New Salem, for it will not only result in bringing them good remuneration, but they will soon begin to disseminate this good blood, and the value that will

come from it to the dairy industry of the state cannot be estimated. The results of the move, however, will depend to a great extent upon how persistent these farmers, who have started to breed these pure bred Holsteins will continue to breed and exercise judicious methods in breeding. We believe the class of men who have these cattle will do this. They, no doubt, will set an example for others in the community and many will follow their footsteps. It is to be hoped that the farmers in that vicinity will all use this Holstein blood to the exclusion of any other breed for if they do this, the New Salem country will become a center for Holstein cattle. Every breeder will benefit by such action for the reason that when a buyer from any part of the state wishes to buy Holsteins, when this section above referred to has a surplus, they will go there to buy, because they can see so many more to select from without going a great distance. A great deal of advantage could be gained by all breeders of pure bred stock if every one that was breeding pure bred in a certain neighborhood was breeding the same breed. The advantages to be gained are many, but the writer does not wish to discuss them at this time.

A great many have inquired for Guernseys. The writer does not know of any pure bred Guernseys in the state. I expect, however, there are some bulls of this breed to be found on some farms, but it is doubtful if there is any one breeding pure bred of this in the state. This is a very good breed of cattle for they rank very high as milk and butter producers in the leading dairy sections of this country.

It is evident from what has been said that there is a good opportunity for any one who might engage in the production of pure bred dairy cattle in North Dakota. It will make no difference what breed one may undertake to produce, he will find no trouble to dispose of what he raises at very remunerative prices. The only condition necessary to assure any one who may undertake to breed dairy cattle of a good profitable business, is to be able to produce them in large numbers successfully. It is not necessary in breeding dairy cattle to depend on the sales of the increase of the herd, but in addition there is a regular revenue to be derived from the cows that are of milking age from the sale of the cream or butter if it is made into butter, I say cream and butter because it would not be wise to sell the milk, for

one would not have the skim milk with which to grow the calves successfully. This is an encouraging phase of the business because by selling the cream and butter and using the skim milk to rear the calves with, better calves can be produced than as if they were fed on the whole milk. A dairy bred calf if it is to be a good cow or bull if fed on skim milk and the proper grain and forage will develop into a good animal, while they might be ruined if fed whole milk.

It is to be hoped that many farmers of this state will turn their attention to breeding pure bred dairy cattle in order to supply the demand on the part of those who wish to engage in the production of dairy products. It is absolutely necessary for our farmers who wish to produce milk to introduce some dairy blood into their herds if they wish to make a success of dairying. They at least will find it necessary to use a dairy sire and grade up their herds. If they are unable to secure them in the state and find it necessary to go to other states for them, necessitating considerably more expense to them, they will be much slower to improve their herds for milk production. The dairy industry in the state, I am convinced, is retarded more for the want of good milk producing cows than any other factor. The business must prove profitable before it will be generally taken up by our farmers and not until they milk cows that have the hereditary tendency to produce milk from the feed they consume, will it prove very profitable in proportion to the close attention necessary to give the business to make it a success.

## THE BABCOCK MILK TEST

Sixteen years ago Dr. Stephen Moulton Babcock announced thru a tiny bulletin, a small, paper bound, few leaved circular, a most humble affair, "a new method for the determination of fat in milk adapted to creameries and cheese factories." The bulletin was sent to a few hundreds of people. It gave no hint of the enormous economic influence of the discovery so simply set forth.

But this discovery has increased the wealth of nations by many millions of dollars and will continue so to do to the end of time; it is the basis of transactions around the globe, running into many thousands of dollars per day; it has been adopted by the butter and cheese makers of every nation in the world; without it the present advanced position of this important feature of modern industrial life would have been impossible.

Prolonged study led the chemist to the conclusion that any determination o



the real value of milk must rest upon chemical action and mechanical force. He knew, for example, that sulphuric acid would dissolve all the solids in milk save the fat, the actual richness of the milk. He knew that a rapidly revolving receptacle would tend, by centrifugal force, to throw forward a liquid confined in a bottle in the receptacle. He combined the two and made the Babcock milk test.

He constructed a machine to put the test in practical operation, primitive in its fashion, but covering all the essential points. I saw this machine not long since, a simple looking affair, which has traveled tens of thousands of miles and has been seen by tens of thousand of people at great expositions in America and abroad.

#### THE VALUE OF LIVE STOCK TO NORTH DAKOTA

By Robert Sampson, Erie, N. D., Prize Essay in the Agricultural Club Essay Contest of the Agricultural College 1908

Agriculture in North Dakota has in the past years been almost entirely devoted to wheat raising. When the land was new it could be had for low prices, help was plentiful and we raised big crops with little effort and no seeming evil effects to the land.

Wheat raising was then both profitable and practical because of the prevailing conditions. But we can no longer continue this soil robbing business. It has been carried on too long now in many parts of the state, and unless we change our farm management, North Dakota will in time go the way some other states and countries have gone before her, and become a country of barrent, abandoned farms. On the other hand, if we adopt proper farm management and raise more live stock and less acres of grain, there is no reason why North Dakota will not become a richer and more pleasant land in which to live. Other countries have adopted these methods and succeeded. Take for instance, England and Holland. They are richer after being farmed hundreds of years than when they were new. Some of our own states like Iowa and Illinois, altho they have been under cultivation longer than our state, are producing more stock and grain than we are. Think of some of the places where continuous cropping has been practiced. For instance, Virginia, Georgia, Central Spain and Palestine. The farmers in those places raised crop after crop of the same kind of produce, till many of the farms were completely ruined and are now abandoned waste land.

There are several reasons why continuous cropping is detrimental to the

soil. The humus or decayed organic matter of the soil is being continuously drawn from, while very little is replaced. The supply of essential plant food elements is continually reduced until at last the crops begin to starve for lack of some of them. The weeds and plant diseases to which continual grain raising conditions are favorable have been increasing in numbers and damage, till their injury to the crop has become quite marked.

A good many farmers resort to summer fallow in order to keep down the weeds and to increase the yields. I do not think that they would do it quite so much if they knew what a wasteful business it is. It is true that summer fallow affects the land in such a way as to make more plant food available for the following crops and increases the yields. On the other hand, as scientific investigation has proved, it sets free more of the plant food to the air and leaching waters than it leaves in an available form for the succeeding crop. So you can see how extravagant as well as expensive a practice summer fallow really is.

We cannot bring about a change in our farming system any too soon. Some of our land is still very fertile, but that is no reason why we should not take measures to conserve that fertility. Experience proves that it is far easier to keep a farm in good condition than to build it up after it is worn out by improper care and negligence.

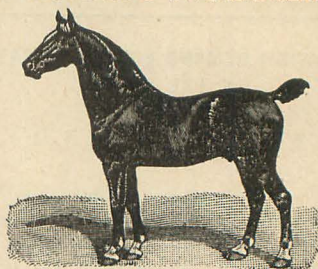
Let us compare North Dakota with a stock raising state in annual produce. The statistics for 1906 show that Iowa produced \$140,000,000 worth of cattle, North Dakota produced one-eighth as much; Iowa produced \$139,000,000 worth of horses, North Dakota produced two-fifths as much; Iowa produced \$6,000,000 worth of potatoes, North Dakota one-sixth as much; Iowa produced \$119,000,000 worth of corn, North Dakota one sixtieth as much; Iowa produced \$5,500,000 worth of wheat, North Dakota nine times as much. Altho Iowa is an older state than North Dakota, and has not as rich soil as we have, her yield of wheat has averaged three bushels per acre more than ours for the last ten years, and her total produce is three times as much as ours.

Why should we North Dakota farmers not raise live stock in connection with our grain crops and increase our produce as well as other states? Wherever stock raising is introduced, the price of land at once rises. Notice how land has risen in value the last few years since some of our farmers have begun raising livestock. Land has risen about fifteen dollars an acre in value during the last ten years.

In devoting part of our labor to live-

Warranted to Give Satisfaction.

## Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.



## Health for the Horse

Loosen up his hide and his intestinal system, purify his blood, drive out the worms, give him an appetite and power to digest and get the full value of all his feed. You can do all this by the systematic use of

### PRUSSIAN HORSE TONIC

and have your horses strong, healthy and high strung. Mix with feed. Only a small quantity required. 1,200 measures in the big pail. Price only \$3.50 prepaid.

Ask your dealer for the standard remedies,

Prussian Spavin Remedy  
Prussian Heave Powders  
Prussian Worm Powders  
Prussian Gall Salve

Write us what stock you own and we will send you our Horseman's Hand Book Free. Write today.

PRUSSIAN REMEDY CO.  
St. Paul, Minn.

## AN INFLAMED TENDON NEEDS COOLING.

### ABSORBINE

Will do it and restore the circulation, assist nature to repair strained, ruptured ligaments more successfully than Firing. No blister, no hair gone, and you can use the horse. \$2.00 per bottle, delivered. Look 2-C Free.

ABSORBINE, JR., for mankind, \$1.00 bottle. Cures Strained Torn Ligaments, Varicose Veins, Varicocoele, Hydrocele, enlarged Glands and Ulcers. Allays pain quickly. W. F. YOUNG, P.D.F., 233 Monmouth St., Springfield, Mass.



stock production, we will have to raise less acres of grain and more feed, but not necessarily less bushels. Corn and the tame grasses have been proven a success here, and raising them is no longer an experiment. Our corn, altho not quite as big, is more palatable and has a higher feeding value than that grown farther south.

Stock raising and crop rotation go hand in hand. It evens up the year's labor, furnishes soil fertilizers, and makes it possible to utilize all the products of the farm which would otherwise go to waste. Two of the benefits derived from crop rotation are, the destruction of weeds and plant diseases, and the better condition of the soil brought about by better tillage. When a cultivated crop, a grass crop or two, preferably leguminous grasses, a corn crop and a few grain crops are grown in rotation, an enormous increase in grain yields is obtained.

The various crops in the rotation differ as to time of seeding, manner of cultivation and time of harvesting, so that the crops can be handled with a smaller force, and the work will be more steady and evenly divided among the summer months than it is on a wheat farm. The legumes, such as clover and alfalfa send big thick roots down deep in the soil, they fix nitrogen of the air in the soil so that the plants can use it and when the roots decay, the

soil is furnished with humus and has more nitrogen than before the legume was grown.

All the straw, which contains a fair percentage of potassium, phosphorus and nitrogen can be made into fertilizer on a stock farm by using it as an absorbent in the yards and stables to absorb the liquid manure. This makes a very rich fertilizer. Stable manure and well rotted barnyard straw manure are rich in humus and contain a pretty good percentage of nitrogen, phosphorus and potassium. Humus formed in the soil from a good farm manure, furnishes food to the plants; it absorbs and holds the moisture for the plants and prevents it from running thru the soil and leaching out plant food. It makes a sandy soil less porous and a clay soil less compact. In decaying, humus affects the soil particles in such a way as to make some of the food in them available to the plants, and in this way furnishes more food to the plants than was contained in the manure.

Without fertilizers we cannot keep our land in productive condition for any length of time and manure is the best and cheapest fertilizer to be had. Commercial fertilizers furnish plant food but no humus. They are far too expensive to use in this state and if we use care in our farm husbandry, commercial fertilizers will not be necessary for many years to come. Thus it is, that diversi-

fied farming will bring to a halt the drain on our natural resources and much better financial conditions will result.

But these are the least of the benefits to be derived from stock raising. Mixed farming means smaller farms, better crops, and less hired help. What do these facts mean to us? With its desert like looking plains, with few trees or buildings, neighbors far apart and schools scattered wide, North Dakota is not the most pleasant place in which to live.

On the other hand if we adopt stock raising and intensive farming, the conditions will become much different. There will be more families in a township, more trees and windbreaks, fences, buildings, and in fact, everything to make the land more homelike and beautiful.

The increase in population is a big boon to society. There will be more schools with larger attendance than we now have had, consequently we will have better school systems and better teachers in the country schools; more churches, and towns, so that the people may enjoy the pleasures of society and associate with their neighbors.

The numerous groves and buildings that accompany diversified farming serve to break the force of winds, thus improving climatic conditions by pre-

**3 Years for \$1 until July 1. ACT!**

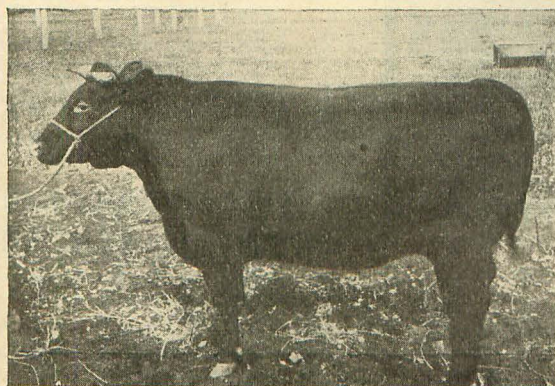
## THE FINAL CALL

For the Seventh Annual Combination Sale of Shorthorns held by the North Dakota breeders at Fargo, Wednesday, June 3, 1908.

THE BIG SHORTHORN SALE OF THE SEASON INCLUDING:

**25 BULLS Everything Tuberculine Tested 25 FEMALES**

This is an opportunity for both the farmer and the breeder. The large consignment of bulls will give the farmer a good chance to get a sire for his grade herd that will suit him. The breeder can also get a bull to suit him in this sale and some promising females. The catalog will reveal some cattle with excellent breeding, consigned. They are not all Straight Scotch, but many are Scotch Topped, which is just as good for the Northwest.



### THE CONSIGNORS

W. W. Brown	S. Fletcher
John Donnelly	E. C. Butler
Helendlae Stock Farm, N. D. Agri. Col.	
Carl Fischer	Harrold Brothers
J. T. Flack	Geo. Pratt
Pius Stroh	Mark Hunt

The Sale will be held in the Judging Pavillion at the State Fair Grounds. Street cars will run to the grounds on sale day.

Sale called at 1:30 P. M.

W. B. RICHARDS, Sec'y.,  
N. D. Live Stock Association,  
Agricultural College, N. D.

### Auctioneers:

Col. R. W. Barclay, Mason City, Iowa.  
Col. Frank H. Hyland, Devils Lake, N. D.



venting the disagreeable dust storms and blizzards of our prairies.

There is always an income from one source or another on a diversified farm. If wheat fails, there are the other products to rely upon. The farmer has not all his eggs in one basket. There are wool, beef, pork, mutton, eggs, poultry, butter, vegetables and grain all to market some time during the year, bringing a steady and sure income.

To properly manage such a farming system, care for live stock and market the produce in such a way as to get the best results, requires men skilled in agriculture, men educated for their business. Better educated men means better citizens, more intelligent voters, better men to fill our public offices than we now have.

So in conclusion I would say that the live stock industry is invaluable to North Dakota. It goes hand in hand with education, better society, better financial conditions and every force that is for the advancement and future welfare of our state.

#### SCIENTIFIC FEEDING

By Prof. C. F. Ames, Iowa Agricultural College

To the minds of some the term scientific in connection with agriculture suggests theory based on speculative or visionary doctrine. This con-

ples and practices which I wish to emphasize.

The hog is pre-eminently the most profitable corn and grain condensing animal on the American farm. No other domestic animal is capable of converting so large a part of the feed it consumes into edible meat, and no other animal yields so large a percentage of dressed meat to live weight.

The hog will make 12 to 15 pounds of pork, live weight, from a bushel of corn; the sheep from 5 to 8, and the steer from 4 to 5. The sheep will kill from 50 to 60 per cent net meat, the steer from 55 to 65 per cent, and the hog from 75 to 85 per cent. As an economical meat producer the hog has no rival.

Viewed as a machine for converting farm feed stuffs into finished products, the hog stands pre-eminent. He is even called upon to supplement and complete the process of converting feed into pork in the feeding of nearly all other stock on the farm. Eliminate the hog's part in the economy of farm feeding operations, and you will remove the factor of profit in many cases.

The outstanding and ever-present menace to hog-raising is disease. Were it not for this, hog production at the prevailing prices would be an easy road to wealth. As it is, successful hog-raisers seldom remain in debt. One of the shrewdest bankers I have rates his customers largely by their

really successful remedy needs no exploiting in the farmer's feed lot. The dealer who is honestly confident that he has a sure cure can well afford to provide his own hogs for demonstration.

That artificial condition and feeding are largely responsible for swine diseases is generally admitted. Corn, the crop that makes pork production so highly profitable, at the same time renders the business extremely hazardous. Yet it can not be said that there is any direct connection between corn and cholera, or that hogs raised without corn would be immune.

The methods attending the use of corn are largely responsible for disease. While no exact statistics that I know of are available, there is generally a well established relation between the price of corn and the prevalence of cholera. I am fully convinced that the hog, until the finishing or fattening period begins, needs more room, more freedom, more grass and succulent feed, and less confinement and corn.

Because the hog utilizes grain products so efficiently and economically, the mistake of feeding grain exclusively is too frequently made. The hog from first to last is capable of getting a large part of its feed from grass. During the growing period grazing is especially important and conducive to health and profit.

A practical and scientific system of feeding should provide for an ample supply of succulent pasture grasses and forage crops for hogs thruout the spring and summer and autumn months.

#### POLAND CHINAS

We have for sale several choice spring pigs sired by "Giant Perfection" No. 3477, a grandson of Chief Perfection, the 2nd, the greatest hog the Poland China breed has ever produced.  
CENTER LANE STOCK FARM,  
Kenmare, North Dakota

#### GREENVIEW STOCK FARM

Has 100 Poland China young pigs, sired by Rockwell Chief, Corwin U. S. 2nd and Prince Corwin. Sows strongly bred of Tecumseh blood. Orders booked now for fall delivery.

Pure Scotch and Scotch Cross Shorthorns. Young and old stock for sale. Call or write if you want North Dakota bred Poland Chinas or Shorthorns.

E. C. BUTLER,  
Cooperstown, N. D.

#### PLEASANT GROVE HERD Shorthorn Cattle, Poland China Swine

We are making a specialty this season of shipping spring pigs. By shipping when not too large the express bill is lighter. We can supply boars and sows not related. Write us for descriptions and prices.

WINN BROTHERS,  
Redwood Falls, Minn.

See Personal on Page 3.



Well Bred, Well Fed

ception is erroneous. Science is merely the correct interpretation of nature's laws.

Scientific feeding is only the most natural and correct method, economy, efficiency and results considered. In discussing the subject I shall not deal with the intricate and technical phases of the subject, so much as with some general princi-

ple to raise hogs. A farmer who turned off a good bunch of hogs each year could always get credit at that bank.

The hog's ailments are numerous tho not formidable, with the exception of cholera. For it there is no specific cure. There are always vendors seeking to exploit cocksure remedies at the feeder's expense. A



## THE TWENTY-THIRD ANNUAL REPORT OF THE BUREAU OF ANIMAL INDUSTRY

The Twenty-third Annual Report of the Bureau of Animal Industry of the United States Department of Agriculture, for the year 1906, has just been published. It is a cloth-bound volume of 478 pages, illustrated by 24 plates and 35 text figures, and contains special articles and information of interest and value to the stockman, the dairyman, the farmer, the scientist, and the general public. This report is issued as a Congressional publication, and a limited number of copies is assigned to each Senator, Representative, and Delegate in Congress for distribution among his constituents. The book contains the following articles:

"Report of the Chief of the Bureau for the fiscal year ended June 30, 1906," by A. D. Melvin; "The Federal Meat-Inspection Service," by A. D. Melvin; "The First Season's work for the Eradication of the Cattle Tick," by R. P. Steddom; "The Susceptibility of Tubercle Bacilli to Modification," by John R. Mohler and Henry J. Washburn; "Epizootic Cerebro-spinal Meningitis of Horses," by R. W. Hickman; "Osteoporosis or Bighead of the Horse," by John R. Mohler; "Some Observations on Rabies," by E. C. Schroeder; "Instructions for Preparing and shipping Pathological Specimens for Diagnosis," by George H. Hart; "The Prevention of Parasitic Infection of Lambs," by B. H. Ransom; "Animal Breeding and Disease," by A. D. Melvin and E. C. Schroeder; "The Danish Hog Industry," by Andrew Fossum; "Suggestions for Horse and Mule Raising in the South," by George M. Rommel; "Investigations in Animal Nutrition," by Henry Prentiss Armsby; "Designs for Dairy Buildings," by Ed. H. Webster.

Besides these articles there are a number of items of miscellaneous information relating to the livestock and meat industries, also data concerning contagious diseases of animals in foreign countries. The volume concludes with an appendix containing the rules and regulations of the Secretary of Agriculture bearing upon the animal industry issued in 1906, the full text of the report of the department committee on the Federal meat-inspection service at Chicago, a copy of the new meat-inspection law, etc.

Several of the articles have been reprinted separately in pamphlet form and can be supplied by the Bureau free of charge.

Doctor Melvin's article on "The Federal Meat-Inspection Service," which has also been issued as Circular 125 of the Bureau of Animal Industry, presents a brief history of meat inspection in this country and describes the oper-

ation of the inspection service under the new law. One is strongly impressed with the care, vigilance, and thoroughness of the present inspection system. The inspection not only comprises a careful ante-mortem and post-mortem veterinary inspection but follows the product thru all the processes of preparing, curing, canning, etc., prevents the use of harmful preservatives and coloring matter, requires honest labeling, and enforces sanitation in all the plants and processes. The insanitary conditions disclosed by the investigation preceding the passage of the new law—over which by the way, the old law gave the Bureau no control—have been removed, and to meet the new sanitary requirements improvements have been made to practically all establishments, ranging from slight modifications to almost complete reconstruction.

Any animals found diseased or suspected of being diseased on ante-mortem inspection are slaughtered under special supervision separately from the others. On the regular post-mortem inspection carcasses which present diseased or even suspicious appearances are promptly sent to what is termed a "retaining room," there to be subjected to a more careful and leisurely inspection than would be possible in the rush of the process of killing and dressing. Carcasses which pass inspection are marked with the words "inspected and passed," or an abbreviation thereof, while condemned carcasses and products are "tanked" and rendered into fertilizer, grease, or other inedible products under such rigid supervision as to prevent their sale for food purposes. The stringency of the regulations governing the dis-

posal of diseased carcasses is attested by the report of a commission of five scientific experts outside the Department of Agriculture who investigated this subject last year at the request of Secretary Wilson and whose conclusion was that "if there be any general error in the regulation it is in favor of the public rather than in favor of the butchers and packers."

Doctor Melvin, however, strikes a note of warning with regard to the need of supplementing the Federal inspection by state and municipal inspection. The Federal inspection can be applied only to establishments doing an interstate or export business, and can not reach abattoirs whose business is entirely within a state. It is not unreasonable to suppose that the sellers having suspicious looking animals will send them to a butcher not under inspection rather than to the inspected houses where they are likely to be condemned. It therefore devolves upon the state and the municipality to protect the irresidents against the danger from places not under Federal inspection, and in the absence of an efficient state or municipal inspection the safe course for the consumer is to buy only meat which bears the government stamp. It is also left to the states and municipalities to see that the markets are kept clean and that no tainted or soiled meats are retailed to the consumer.

### AUCTIONEER

#### PEDIGREED LIVE STOCK AND LARGE FARM SALES.

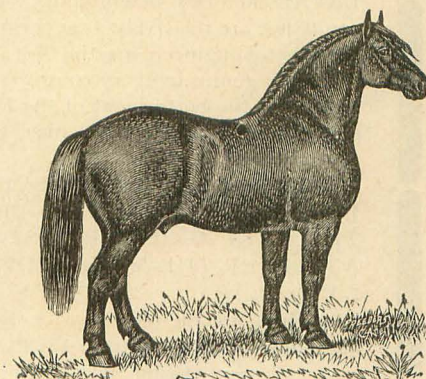
REFERENCE: Any pure blood breeder in the Northwest.

Graduate National College of Auctioneers.

**FRANK H. HYLAND,**

Devils Lake, - - - - - North Dakota

## PERCHERON HORSES



We offer the best lot of colts we have ever raised, most of them coming 2 and 3 years old. Our old mares are nearly all granddaughters of Brilliant (755) 1271, and these colts are sired by Chasseau, a stallion of great merit, weighing 2100 pounds. A few mares in foal. Can furnish stallions and mares not related. We sell on time for good paper. Established 1891.

At Fargo we won first in every class we showed in, except one, with stock we bred on our farm. We also won sweepstake on a two-year-old mare that we bred and raised.

**WHITE BROTHERS, Valley City, N. D.**

W. WHITE

M. W. WHITE



# DAIRYING IN NORTH DAKOTA AND WHAT IT SHOULD BE

Extract from Address before Grain Growers' Convention, by Hon. R. F. Flint, Assistant Dairy Commissioner, Bismarck

There is nothing remarkable in the dairy growth in North Dakota during the past year unless we consider the great change of sentiment among the farmers of the Red River Valley remarkable.

From Pembina county on the north to that very appropriately named Richland, on the south, among practically all of the farmers of this wonderfully fertile valley—long heralded as a great wheat section—exists a feeling that there must be less rainfall, or a different system and method of farming will have to be adopted if they continue to be prosperous. At the present time many of the farmers are more than half convinced that they should devote more attention to live stock and dairying.

The great question is, how shall we handle our large farms, if we add to the amount of labor required to work them when we have not been able to manage them under our present system? In some sections, and it is true to a greater or less degree all thru the valley, the younger generation has followed the example of their seniors. They have moved from the place of their birth to newer fields. Some settling in the western portion of our state, some in Canada, there to carry on the methods of their fathers, raising wheat, leaving the parents on their broad acres alone. Truly the question of how they may best change their methods of farming is a difficult one to answer. I do not expect to answer it, but, earnestly hope that the thousands of pioneers, who have changed this prairie from a treeless, furrowless, houseless plain to one of beautiful groves, endless fields, and the most comfortable homes will so arrange their operations that these farms will become the homesteads of their descendants for hundreds of years, as is the custom in the old country, and if they were to sell, where could they go to find soil such as they now have, or how could they obtain homes like these they now occupy? In the central portion of our state they are not giving so much thought to dairying. They have better drained lands and have been having fairly good crops. In the western portion dairying is becoming more and more recognized as a sure and a very profitable branch of a grain or stock farm.

While the area where dairying is carried on most extensively is small, it

# DE LAVAL CREAM SEPARATORS ALWAYS IN THE LEAD

From the invention by DE LAVAL of the first practical cream separator in 1878 the DE LAVAL machines have been always in the lead.

The first "hollow" bowl cream separator; the first factory cream separator; all of the several first styles of hand separators; the first steam turbine separator; the first "disc" bowl separator, and the first "split-wing" or distributing tubular shaft separator—were each and all DE LAVAL inventions, each marking periods of advancing evolution in the usefulness of the cream separator.

So too were the first "tubular" shaped bowl separator; the first bottom feed separator; the first vertical "blade" bowl separator; the first interior cone construction bowl separator, and numberless other types of construction, each and all DE LAVAL inventions, tho found so impractical or comparatively inferior, from one reason or another, that they were never put into commercial use in the DE LAVAL machines.

Every would-be competing cream separator on the market today merely utilizes some patent expired or abandoned DE LAVAL construction, and if any one of them should make pretense of denying it the patent evidence may be easily produced showing the falsity or evasion of such denial.

The new 1908 DE LAVAL cream separators mark another great evolution in cream separator construction, being new and remodeled in practically every detail, and place a still wider margin of superiority between the DE LAVAL and even the best of imitating separators.

The DE LAVAL main factories in the United States and Sweden are the largest and finest of their kind and have ranked for ten years among the model shops of the world; their equipment is the best that mechanical science and money can make it; the twenty smaller DE LAVAL factories, assembling, and repair shops, in as many different countries, are relatively as superior, the DE LAVAL inventors and experimental engineers are the best of the men who have shown practical separator genius in every country, and a large staff of them is kept constantly at the betterment of the DE LAVAL machines, while the shop employes generally are the most competent and best paid in their various classes.

THE GREAT OBJECT EVER KEPT BEFORE EVERY MEMBER OF THE DE LAVAL PRODUCTIVE ORGANIZATION IS THE MAKING OF THE BEST CREAM SEPARATOR POSSIBLE AND EVER THE MAKING OF IT BETTER THIS YEAR THAN LAST YEAR.

These are the reasons why the DE LAVAL machines began in the lead and have kept it from 1878 to 1908, excelling all attempted imitation and competition in even greater degree today than at any past time.

The new 1908 DE LAVAL catalogue—affording an education in separator knowledge—is to be had for the asking.

## The De Laval Separator Company

42 E. Madison St.  
CHICAGO.  
1213-1217 Filbert St.  
PHILADELPHIA  
Drumm & Sacramento Sts  
SAN FRANCISCO

General Offices:  
74 Conrtlandt St.  
NEW YORK

173-177 William St.  
MONTREAL  
14-16 Princess St.  
WINNIPEG  
107 First Street  
PORTLAND, OREG.



is growing constantly. Morton and Oliver counties are leaders in this line on the slope. The extreme western portion of the state has no creameries in operation.

The advent of the steam plow, high prices for grain, good crops and thousands of new settlers, anxious to realize as much return as possible in the shortest time has had a tendency to check interest in the slower going cow. She will come to be properly appreciated in due time, not only in the extreme western part but in the whole state.

The farmer with a quarter section, twenty good cows and fifty or one hundred hens can make a living whether he gets a wheat crop or not, but if he is dependent upon wheat alone, one year's failure means an indebtedness that may require several years of fairly good crops to put him even again. In the good years the cow and hen play their helpful part just the same, but in the mad rush to get rich quick, they are all too apt to be forgotten, like the premium on our insurance, until after the fire and then we wake up.

One of the greatest hindrances to profitable dairying any place in our state is the lack of feed fed to cows. I called on a farmer recently to inspect the dairy conditions and noticed that his horses were sleek and fat but that the cows seemed to have been neglected. I asked how much grain he fed the horses. He said, "I feed one-half bushel of oats." "You mean a half bushel a day," I said. "No, a half bushel to each horse three times a day during the working season." I then asked him what he fed his cows during the winter. "Oh, I feed some hay and occasionally some salt." There you are, and this man's plan is carried out by a great majority of our farmers who are keeping a few cows merely as a side line. When they get as much interested in their cows as they are in their horses they will be much better feeders, the income from the cows will be greater, and they will be great deal better dairymen

#### LATEST MARKET REPORTS

By W. R. Ingram, Mgr. Union Stock Yards, So. St. Paul  
May 7

	Cattle	Hogs	Sheep
4 da. this week	6000	17716	900
4 da. last week	4904	9771	692
Jan. 1, '08 to date	110132	504844	86565
Same time last yr.	89563	319068	55785

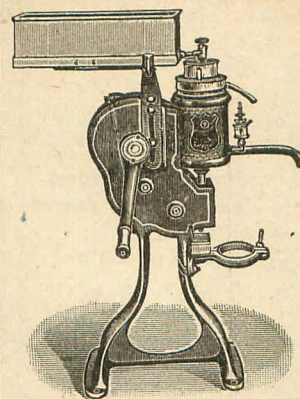
Increase 20569 184776 30780

#### Cattle

##### Grain Fed

Steers, good to choice.....\$6.00-6.75  
Steers, fair to good.....5.00-5.75

## FOR 16 YEARS THE BEST! STILL BETTER IN 1908 UNITED STATES Cream Separators.



The United States has always, since its introduction, separated more cream from the milk, and has done it more thoroughly and quickly than any other separator. The figures of the public national and international tests demonstrate this.

### THE 1908 MODELS HAVE IMPROVEMENTS

which make the handling of milk still easier, quicker and more profitable. They do their work more efficiently, more economically than any other, and are built to wear. In spite of the fact that the demand is greater than ever before, and that dairymen everywhere are exchanging other makes for the reliable and efficient United States, the standard separator, we are prepared to make prompt deliveries anywhere.

Write to-day for "Catalogue No. 127 and any desired particulars  
**VERMONT FARM MACHINE CO., Bellows Falls, Vt.**  
Distributing warehouses at: Chicago, Ill., La Crosse, Wis., Minneapolis, Minn., Kansas City, Mo., Omaha, Neb., Toledo, O., Salt Lake City, Utah, Denver, Colo., San Francisco, Cal., Spokane, Wash., Portland, Ore., Buffalo, N. Y., Auburn, Me., Montreal and Sherbrooke, Quebec, Winnipeg, Man., Hamilton, Ont., Calgary, Alta.

490

## Bosard Farming Company.

### JERSEYS AND BERKSHIRES. STANDARDS OF EXCELLENCE.

IN SERVICE:  
Lottie Melia Ann's  
King. Several sons  
of this bull for sale.  
Other registered bulls  
for sale.

SIRE: Melia Ann's King, the Famous \$15,000 bull.  
DAM: Lottie Melia Ann, the cow with a record of 20 lbs., 2 oz. butter in seven days, 9250 lbs. milk in one year, 23120 lbs. milk in three years and dam of three tested daughters in the charm list.

IN SERVICE:  
CHARMER LONG-  
FELLOW 2nd.  
Registered sons and  
daughters of this  
boar for sale.

SIRE: Premier Longfellow, the World's Grand Champion Boar.  
DAM: Lee's Charmer Belle 3rd. No. 92797.

For pedigrees and information of these pure bred cattle and hogs write:

## BOSARD FARMING COMPANY,

WARREN,

MINNESOTA

#### MAPLE GROVE RED POLLS

A few choice calves for sale from a well established herd. Address

W. B. DANFORTH,  
Little Cedar, Iowa.

#### REGISTERED JERSEY BULL

Pedro's Emperor 72039. St. Lambert, dropped Sept. 1902.

Took 1st premium at N. D. State Fair '03, '04, '05. Riota Empress, his mother produced over 5000 lbs milk with 1st calf.

Will sell cheap on account of being closely related to our herd.

W. E. & J. P. EBERSOLE  
Upham, N. D.



Cows, heifers, good to choice	4.00-5.25
Cow-heifers, fair to good	3.00-4.00
Cutter Cows	2.50-2.75
Canner Cows	2.00-2.25
Bologna bulls	3.00-3.50
Veal Calves, good to choice	3.75-5.25
Veal Calves, Common	1.50-3.00

**Stockers & Feeders**

Good to choice feeding steers	\$4.25-4.75
Common to fair	2.75-3.25
Fair to good, 800 to 900 lbs.	3.75-4.25
Good to choice stock steers	3.75-4.25
Fair to good, 600 to 800 lbs	3.25-3.75
Common stock steers	2.50-3.25
Stock-feed bulls	2.50-3.25
Good to choice stock heifers	2.50-3.00
Common Stock heifers	2.25-2.50

**Hogs**

Price Range Bulk Price

Thursday	5.40-5.55	5.45-5.50
Friday	5.40-5.55	5.45-5.50
Saturday	5.35-5.55	5.45-5.50
Monday	5.30-5.45	5.35-5.40
Tuesday	5.40-5.60	5.40-5.50
Wednesday	5.40-5.50	5.40-5.45
Thursday	5.35-5.45	5.40-5.42½

**Sheep**

Lambs, good to choice	\$.625-6.50
Yearlings, good to choice	5.50-5.75
Ewes, good to choice	4.50-5.00
Wethers, good to choice	5.00-5.25

**THEY APPRECIATE GOOD CATTLE AT  
S. ST. PAUL**

The following was clipped from the S. St. Paul Reporter which indicates that North Dakota contributes some good cattle to the market. J. G. Mills who bred the \$6.00 heifer is one of the leading Hereford breeders of North Dakota.

"H. H. Miller of Cooperstown, N. D., brought in a Hereford heifer, full blood, which might be used as a text for a missionary sermon by shippers on the value of good stock. She pointed the moral by landing at \$6.00, a price that is good to look at and is calculated to make any shipper's mouth water. The heifer is a three-year-old and weighed 1,400. She was raised and bred by J. G. Mills of Hannaford who evidently has an eye for stock. Mr. Miller who brought her in as part of a load of fat cattle, all of which brought satisfactory prices, is an old shipper to this market and knows a good thing when he sees it.

In comparison with the vast majority of cattle brought into this market such a heifer is a sight to cure sore eyes. It would pay a whole lot of indifferent cattle raisers in this state to come in and take a look at her.

The effort to improve the quality of live stock in this state has been long and tedious and in a measure disheartening. It is apparent that many farmers will continue to believe as long as they live that anything with a *steer's hide* on it is a steer and that

it is profitable to raise a class of cattle that buyers rightfully ought to be paid to take.

The prices paid on this market for well finished fat cattle are evidence of the crying need of it. The prices paid for good feeders and stockers speak unmistakably of the demand for stuff of quality. The fact that the tail-enders, the common butcher stuff and the railbirds of the stocker and feeder division get the hard wallop of every decline in prices fortifies the evidence. The experience of every other stock raising state or nation a continual lesson in the economy of producing good stock, the kind that buyers need and must have. But it would take a surgical operation to convince some farmers. Their acres are more fertile than their brains.

The progressive elements among farmers is appreciative of good stock and their experience verifies the general conclusions. They are assisting ably in the movement for better live stock as well as for better farm methods generally."

**BAD MILK**

What is the cause of a cow's giving milk having a very strong taste, so strong, indeed, that it is very noticeable

in butter made from the cream? Can you give any information as to what should be done in this matter?

Crosby, N. D.

S. S.

**Answer**

It would seem quite probable that the trouble might come from the feed which the animal receives. If they are just out at pasture, the cow might be nibbling green weeds, which might give a very rank or strong flavor to the milk and butter. If they are on dry feed, it might come from the character of the hay or damaged grain that is being fed; or, at times just before the cow goes dry when a small quantity of milk is given it becomes affected, a change of feed I should expect would result in improvement.

**Registered Black Percheron Horses  
and Red Polled Cattle.**

Yamagata, 40966, 1st premium, gold medal and championship at N. D. State Fair 1906.

Zip 13342, herd bull, first prize winner and sweepstakes N. D. State Fair 1905.

YOUNG STOCK FOR SALE.

CENTER LANE STOCK FARM,

Kenmare, N. D.

**Registered Red Polled Cattle**

Young stock of both sexes for sale.

C. G. FAIT &amp; SON, MONANGO, N. D.

**Clover Hill Shorthorns**

Young cows, heifers and bulls for sale. Herd headed by Imp. Ben Lomond 224418. Prices reasonable. Jas. O'Hara, Lanesboro, Minn.

**WILLOW GLEN SHORTHORNS AND POLAND CHINAS.****HOME OF MINN. KEEP ON**

He was first premium at Minnesota State Fair 1907. Have a few choice gilts for sale weighing 250 lbs. Bred to Minn. Keep On, at prices that will move them. We are building up as good a herd as can be found in the northwest.

Also have good bulls at right prices for sale.

R. F. D. 3., White Rock, S. D.

AXEL W. PETERSON,

**ENVILLA STOCK FARM,  
COGSWELL, N. D.,**

200 HEAD REGISTERED ANGUS CATTLE—Calves, yearlings, bulls and cows of the best breeding and lowest prices.

150 SHETLAND PONIES AND GRADES—Any color, size or weight.

300 ANGORA GOATS—Kids, billies and nannies.

250 REGISTERED HOGS—Duroc Jersey, Improved Yorkshire, Hampshire, Improved Chester White and Poland China. Bred gilts and young pigs.

5000 HEAD POULTRY—All varieties: Rocks, Wyandottes, Leghorns, Reds, Brahmas, Orpingtons, Houdans, Minorcas, Games, Javas, Hamburgs and Bantams.

GEESSE—Toulouse, Embden, Buff, Chinese, African and Canadian-wild.

TURKEYS—Mammoth Bronze, White Holland and Buff.

DUCKS—Pekin, Muscovy, Wild Mallard, Indian Runner and Rouen.

PEA FOWLS, PHEASANTS, PEARL AND WHITE GUINEAS, FANTAIL PIGEONS—Birds and eggs from above varieties. Some choice cockerels. Baby chicks one day old.

RABBITS, HARES, GUINEA PIGS, SQUIRRELS, COONS, ANGORA CATS, WOLF, FOX AND RABBIT HOUNDS. COLLIE DOGS.

Write us for complete price list of varieties. Remember we won 90 per cent of the Blue Ribbons the last two years at the State Fairs. Order your eggs for hatching, poultry and stock of

ENVILLA STOCK FARM,

Cogswell, N. D.

L. H. WHITE, Proprietor.



## Poultry Department

By MRS. B. F. WILCOXON.

Prevention should be the watchword of the poultry raiser in his fight against lice and mites.

The poultry and poultry owner that scratch around lively will later have something to cackle over.

Any old scrub will lay in the spring time. You should show your skill by producing fowls that will lay in the winter time, too.

A nondescript flock of many colors never gets a second glance, but a pure bred flock, all alike and of the same size, attracts attention even from those who are not interested in poultry.

If you have some mixed fowls and you wish to work into thoroughbreds at a small cost, probably the cheapest and easiest way is to secure a few settings of eggs from some careful breeder and variety you desire.

It should be remembered that a profitable business is not built up in a year. Years of experience are necessary to make a good poultry raiser who understands his business in every detail, but there is no other business that will be as profitable while it is being learned.

No machine can make good hatches from poor eggs—those lacking in fertility or high egg quality. No machine can hatch chicks strong enough to live if not properly brooded. They may hatch beautifully and die peaceably in a short time. A hen could not do it. Neither can a machine.

In mating his fowls the breeder in carrying in mind his object in breeding and looking over the characteristics of each individual bird in a small pen may be able to produce some results that are highly gratifying. He may be able to overcome some serious defects and if not entirely overcome the defects he may be able to considerably lessen them, so that they will not be so prominent and so of less injury.

Do not carry a lot of disqualified fowls to maturity. Kill them off and save the feed. If you are breeding single comb, smooth-leg fowls, look for side sprigs and feathers on the legs. Kill off all fowls showing these defects. Fowls showing "squirrel tails" "wry tails" and deformities like crooked backs should be marketed.

Few people there are who do not have to learn by hard experience that brooding the chicks is the greater science of the two. It is an art and must be mastered before any great amount of success can be obtained. If you want to breed to the standard or cater to the fancy trade, start with one breed and let it be the best of that breed. You should not have many of them unless you have had some experience.

It is impossible to cull your flock too closely. Always draw from the poor quality for market purposes and to sell. Never permit the best and most valuable to go from your possession, unless it is in the way of an exhibition specimen, which perhaps can be as well spared from your flocks as not. What you should hold fast to are the most vigorous, most profitable producers, and cultivate them for future results.

We are glad to notice that the agriculture press thruout the country has taken up the cry of more wheat and less corn for laying hens. So soon as the people thruout the country learn that corn will not produce many eggs during the winter months, and that wheat will produce a profitable egg yield the more pleased will they be with the results of egg production from the hens. Too much corn assures an empty egg basket. Plenty of wheat bids fair for a profitable egg production.

Even if your breeders are right you may fail to raise prize stock, for all depends on the raising of the stock. They must grow from the day they are hatched until they reach maturity if you want good stock. No other method will bring results. A stunted fowl is a poor breeder every time and a detriment to any man's flock. The only thing to do is to put such stock on the market, making room for promising stock. Then hatch your stock early and bring them to maturity as soon as possible then you will surely be ready to have good stock to sell at a handsome price and make good profit.

As a matter of fact, it is next to impossible to say just what ration is best for fowls until one tries it. I know, from experience that certain rations which friends have found to be "just the thing" have just been wrong for my flock. I might feed a warm mash at night and my neighbor feed it in the morning, and we each feel that we get

the best results. The only solution of the feeding problem is for every one to work it out for himself with his own flock. With some hens even a small ration of corn stops the egg production, while with others a more than half ration seems to bring the best results. The poultryman who begins to work out the rations best suited to his flock is the one who will win success.

Animal food of some kind must be made use of or the largest egg supply can not be obtained. There are many kinds of animal foods. Milk, which is considered the most natural of all animal foods, is largely used. Meat products of all kinds are employed to a greater or less degree. The nearer we come to Nature's food supply, worms, bugs and insects of all sorts, the more likely are we to have a greater return in egg production. There is nothing so near to the natural animal food supply as green cut bone. This contains living animal food, and body sustaining elements. There is no other kind of animal food that comes so near to nature's demand as the green cut bone.

## Don't Sell Your Eggs

When they are cheap pack them with my new method—will keep two years—will be as fresh as new laid eggs. No special place required to store them. Cost only  $\frac{1}{2}$ c per dozen to pack them. Write me for circular.

MRS. B. F. WILCOXON,  
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From prize winning and high scoring, Barred, and White, P. Rocks, White and Silver L. Wyandotte, S. C. Brown and White Leghorns. M. Bronze Turkeys. Extra fine Toulouse Geese and Pekin Ducks. Same pens have 10 females with an average score of 93 points. Write for prices and winnings.

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ROSE COMB WHITE LEGHORN EGGS  
15 for \$1; 30 for \$1.50; 100 for \$4. Circular.  
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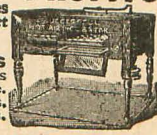
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Our new 128-page Poultry Book teaches the inexperienced and gives the expert many valuable hints. Tells why "SUCCESSFUL" INCUBATORS AND BROODERS are best. Offers 14 varieties of fine birds and eggs at low prices. Catalogue free. Booklet on "Proper Care of Chicks, Ducks, Geese and Turkeys." 10 cents. Poultry paper 1 year 10 cents.



DES MOINES INCUBATOR CO., 288 Second St., Des Moines, Ia.



## CHICKEN LICE AND MITES

From A. C. Bulletin No. 78

The two most common parasites of fowls are the common hen louse and the red mite. These pests appear to be as universal in their distribution as the domestic fowl itself, and cause untold damage, yearly, to the poultry industry. Lice feed on the feathers and possibly on the dead cuticle of the birds, while the mites gnaw the flesh and suck the blood. If lice are present in much numbers on fowls, they will readily be seen in the feathers under the wings, or about the vent. Mites do not ordinarily remain on the fowls during the day but secrete themselves about the roosts and in the crevices of the pen or house. At night they come forth from their hiding places and attack the birds. The lice vary greatly in size, ranging according to Dr. Salmon, from one thirtieth to one sixth of an inch in length. Mites are much smaller and appear as minute bodies about one-fortieth of an inch in length. If present in large numbers they congregate in clusters under and at the ends of the roosts. When mites are filled with blood they are easily recognized by their dark red color; otherwise they may appear white or of a yellowish cast. A good indication of the presence of mites in the poultryhouse is their excrement, small grayish patches, like fly specks, appearing on the roosts.

## Method of Destroying Lice and Mites

Under ordinary circumstances no special measure need be taken for exterminating hen lice. If lice are abundant in a flock of poultry either one or perhaps all of three conditions are present: the stock is lacking in health and vigor and will be more or less debilitated; the house is ill-ventilated, poorly lighted and unsanitary; and the fowls do not have access to good dust baths. A healthy hen if given a fair chance will keep free from lice. In well ordered flocks, however, an occasional fowl is found which appears sickly and out of condition. Such fowls readily become the prey of lice and should receive assistance in getting rid of the parasites. Some good insect powder, well dusted into the feathers, will prove a very efficient remedy. Setting hens and hens with their broods should also receive like treatment. Head lice on chicks may be killed by a single application of pure lard or butter. Some poultry keepers make a practice of immersing their fowls bodily in a one per cent solution of carbolic acid. Such treatment altho effective is too laborious and is unnecessary unless an extreme case must be dealt with.

Mites are very difficult to exterminate and their treatment must be of a rigorous nature. When the house is

badly infected, all fixtures in the pens, such as roosts, dropping boards, nests, etc., should be removed, and the inside walls, floor, ceiling, and also the fixtures themselves, thoroly wetted by spraying on a solution made by dissolving 6 ounces of crude carbolic acid to each gallon of hot water. If a spray pump cannot be procured the solution may be applied with a house broom. This treatment can be followed up a few days later by the application of a good coat of whitewash. Any mites that have escaped the first treatment should be effectually killed by the whitewash.

## Preventative Measures

The best preventives for lice and mites are cleanliness, well-lighted pens, and efficient dust baths. To secure a fair degree of cleanliness the droppings should not be allowed to remain in the pens beyond a reasonable length of time. If dropping boards are used a daily removal is preferable. The scratching litter should be renewed when it shows indications of becoming foul. Plenty of sunlight is essential to good sanitation, and in constructing the poultryhouse this should be taken into consideration. The establishment of the conditions just mentioned, however, is not sufficient to ward off vermin unless some means are adopted for furnishing the fowls dust baths. Common road dust with ashes, is all that is necessary to supply the hens with good dusting material. During the summer the fowls will usually furnish their own dustbath if allowed a good range.

A coat of whitewash applied yearly to the inner woodwork of the poultryhouse is one of the best preventives as well as destructive agents for lice and mites that can be used. Kerosene is also an invaluable remedy, and if used on the roosts and dropping boards several times a year, will be found very useful in checking the inroads of these parasites. Many of the standard insecticides on the market are economical and every effective for this purpose.

Ventilation is a very good thing if it is properly done, and is all wrong if it is done in a manner that will prove injurious. I have studied the problem up one side and down the other and have finally discarded all kinds of new fangled devices in my poultry houses. In the summer time I have the doors and windows both open in such a manner that draughts of air cannot blow directly on the roosts and they are managed so as to exclude the vermin but not pure air. In winter when the chickens are scratching in the scratching room for a part of their breakfast, the roosting apartments are thrown open, cleaned and made as sweet as possible. Then the doors are closed and all is ready for the flock to return

again. I feel like saying that it is impossible too have much fresh air. Any person, animal, or fowl that breaths pure air cannot get too much pure air.

The culls will bring a fancy price now for table use. The quality that makes one head of stock better than another is its money making capabilities. Few, if any, dispute that thoroughbred animals possess no superior advantage in market value over the scrub. Whence comes the difference? What produces it? It is the quality of the product that increases or diminishes the cash value. Quality in fowls or animals results from superior blood characteristics, perfected thru careful selections as to type, productiveness and beauty, all harmoniously blended into almost perfection by skill of man. In buying purebred fowls at the present time, one is buying not the chicks alone, but also is buying years of breeding true to a perfected ideal.

In buying birds we must remember that the blood of parent stock will show in the offspring; if you start with mongrels you can expect to breed nothing but mongrels. Buy good stock, it will be the cheapest in the end. Don't look for, or expect more than your money's worth, or you will be disappointed. Pay a fair price and you can expect to receive fair value. And remember that good stock will not thrive and prove profitable unless the best care is bestowed upon them.

## EGGS! EGGS! EGGS!

For hatching, from my heavy laying strains of **Thoroughbred Poultry**. Eggs from all varieties of Plymouth Rocks and Wyandottes at \$1.50 per 15, \$4.00 per 45, \$7.50 per 100; from all varieties of Leghorns \$1.00 per 15, \$2.50 per 45, \$5.00 per 100. **Satisfaction Guaranteed** in every sale. Send in your order, or write for my large illustrated circular. It tells all about my great laying strains of Fancy and Utility Poultry and about my Pigeons, Rabbits, Bull Terrier Dogs, etc.

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All varieties of standardbred chickens, ducks, geese, turkeys, peafowls. Send 4 cts. for catalog. J. J. Brenner, Dept. 11, Mankato, Minn.

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## OILS, PAINTS, AND PAINT PIGMENTS.

If you have any painting to do this spring, remember it does not pay to buy turpentine adulterated with mineral oil benzine, etc. Neither should you use linseed oil that is part mineral oil or fish oil. Get the best, for after all the oil is one of the first essentials in any paint. It is the life of a good paint and a poor paint is sure to be a failure without it. There are some dishonest painters as well as paint manufacturers doing business in the state. Look out for them and see that you get what you pay for. There have been some mighty bum work done in Fargo and some Grand Forks painters I am informed have had to pay for their dishonesty. Weed them out or you weed out watered paints.

### PAINT LAWS

Much interest has been manifested as the result of the introduction to Congress of several Bills intended in some measure to regulate the sale of paints thruout the United States. One has been introduced by Congressman Marshall of North Dakota, which requires that all paints be truthfully labeled not only with regard to weight and measure and the name of the manufacturer, but, also, as showing the per cent of the various ingredients which enter into the paint. Another bill introduced by Senator Dalzell of the House differs not materially from the Marshall Bill in its essential features. There has, also, been introduced in the Senate a bill by Senator Hayburn, which is similar to that by Marshall.

There has already been one hearing before the House Committee and one before the Senate Committee. Considerable opposition on the part of the manufacturers has been developing toward the enactment of any law that requires the labeling of paints to show of what they are composed. Manufacturers seem willing to have a law forcing full measure and weight, but they do not like to have the public know of what some of the paints are composed. If the paints sold in other states, like some of those formerly sold in North Dakota, that is, the liquid portion contains as high as 25% of water and 15% of benzine in place of linseed oil and turpentine, it is no wonder that they do not care to have the public know of what they are composed. If the pigment is largely cheap earths, barytes, chalk, marbledust, etc., it is no wonder that they are anxious to keep facts hid away from the public.

The writer has seen a test made of one of these cheap paints where inside of fifteen months there was no protective

coat left, and from observations made, it is believed that this fairly represents the condition of many of this class of paints as sold by the Department stores and catalog houses, and even of some of

the paints which have in the past been upon the market.

A story told by one who appeared before the House Committee illustrates the deception at times practiced. He said:

"I remember, when a very young man, hearing Henry Ward Beecher tell

## What Will It Do?

This is the question for you to ask when buying paint.

There are too many paints on the market that have no merits except that they sell at a low price or are made of S. P. Lead or Lead and Zinc.

What you want in paint is

1st.—DURABILITY

2nd.—COVERING CAPACITY

3rd.—APPEARANCE

4th.—COST PER YEAR TO  
PROPERLY PROTECT  
THE SURFACE

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## Bradley & Vrooman PAINT

The BEST of ALL good Paints. Nicest looking; farthest spreading; longest wearing; most economical. Most important of all, it is a WATERPROOF coating of great PROTECTIVE and PRESERVATIVE qualities, so PREVENTS ROT and DECAY.

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of his experience when conducted thru a white lead factory by the proprietor, and the process of grinding lead was explained. The manufacturer went to a large keg and took a handful of white material and threw it into the mill where was being ground the so-called "white lead." On being asked what that was for, he said it was to ease his conscience, for he could now say that, "the best part of it is pure white lead."

This is probably an extreme case, but it illustrates the tendency towards adulteration and substitution in white lead, which has been carried even to a greater extent in mixed paints. By this it should not be inferred that all mixed paints are of like character. The writer is, and always has been, friendly to mixed paints, but we have a right to know whether the mixed paint is what it is represented to be, and what it contains, and then leave it to the public to decide for themselves as to whether this is the class of paint they desire to use.

One of the arguments presented before the Lead Committee was that the manufacturer should not be obliged to give up the secrets of his trade in the formula on paints. When you can get an analysis of any paint upon the market for \$50, he is giving up no secret, and that is about the cost for

the average paint analysis. This is only a subterfuge on the part of the manufacturer to hide behind, and should not influence the public.

#### PAINT PARAGRAPHS

Briefly stated, two important questions were involved in a recent decision of the U. S. Supreme Court, namely:

1. Have legislatures the power to fix a standard of purity for an article of commerce not intended to be used as food, drink or drug?

2. Is the North Dakota statute so reasonable and just an exercise of that power as not to violate the provisions of the fourteenth amendment?

The Supreme Court has decided both questions in the affirmative and the influence of the decision on future paint legislation will probably be widespread and vital.

A business man who is honest and has nothing to conceal, feels no terrors at a threatened scrutiny of his methods. Likewise the maker of a genuine product has no fear of investigation and comparison.

When the public know as well as the painter what good painting is, the painter will have better times.

In any line of business, it is only the faker who makes money out of the ignorance of his clients or patrons.—Dutch Boy Painter.

## How to Avoid Stale Paint

Use Carter Strictly Pure White Lead, mix with pure linseed oil and dryer, and you will have fresh paint that will look better, wear longer and cover more than any canned paint mixture or substitute for pure white lead.

## CARTER Strictly Pure White Lead

is every atom paint. None of the clay, chalk, water, benzene, etc., that cause ordinary imitation paints to scale, crack and fade. Gives any desired color. Sold by reliable dealers everywhere.

Send for our booklet, "Pure Paint." Shows six beautiful color schemes, and tells how to properly paint farm buildings. Tells how to test white lead and detect adulterants, and will save you money. Sent FREE.

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## How Can I Know About Paint Before I Use It?

asks the cautious man or woman. After the paint is on the house it is too late. The money, not only for the paint, but for the painter's labor, has been spent. Why not do as the big paint users do—railroads, contracting painters, factory owners, etc.?—they test White Lead, which is the solid ingredient of all good house paint, before it is applied.

The paint ingredients (White Lead, Linseed Oil and coloring matter) should always be bought separately and mixed by the painter fresh for each job. The test for quality is then made before the paint is mixed. It is not a bit complicated; all one needs is a flame (candle, gas or spirit lamp) and a blowpipe to intensify the heat.

White Lead is corroded metallic lead, the same as shot, lead-pipe or home-made sinkers for fishing lines. Intense heat forces the pasty "White Lead" back into its original form of metallic lead. If, therefore, your experiment fails to produce any little globules of metallic lead, you may be sure that the supposed White Lead is either adulterated or totally bogus.



#### FULL WEIGHT KEGS

The Dutch Boy Painter on a keg guarantees not only purity, but full weight of White Lead. Our packages are not weighed with the contents; each keg contains the amount of White Lead designated on the outside.

We will furnish the necessary Blowpipe Free upon request

if you wish to test paint. We are glad to have you test our White Lead. Would we dare to do this, if there were any doubt as to the purity of our product? Ask for Test Equipment 35 Address

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The Sherwin-Williams Label      *on* Paint

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It will pay you to use S. W. P. It is for sale by the best dealers everywhere.



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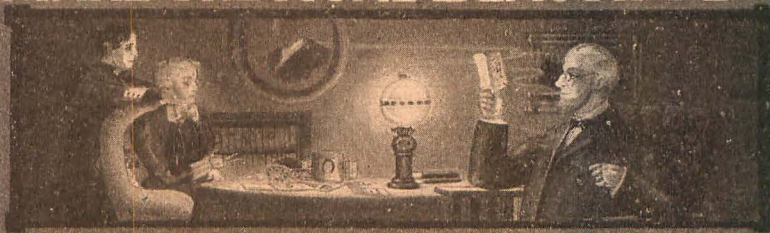
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To produce the highest quality in paint, there must be but one incentive; the will to do it. If the question of profit or individual preference is allowed to influence or prejudice its composition, success in reaching perfection is balked.

Science can recognize nothing but truth. Intention may be honest and desire laudable but if either swerve from the fixed principle of law and fact the discovery of truth must wait for the unbiased mind to reveal it.

The **HORSE SHOE PAINT** is made of materials recognized and accepted by all authorities practical and scientific as the best known for paint making. There is nothing in it about which there is any question or dispute. It's a pure zinc, lead and linseed oil paint, with the necessary pure drier and tinting color. All standard, nothing experimental.

When all authorities are as fully agreed as they are on zinc, lead and linseed oil, that some other material is necessary to improve it, we will add that to its composition. Until then the **HORSE SHOE BRAND** will remain as it is, a composition of the standard paint materials, free from everything doubtful or experimental. That is a course equally safe for all parties.

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